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ABSTRACT

This study analyzed the critical features of three delivery modes for Head Start services in order to: (1) compare the effects of different delivery modes on the immediate outcomes for children and parents; and (2) explore the pattern of effects both within and across modes to ascertain how the process works. The first mode represented the most traditional mode of Head Start programming: a five-day per week, half-day, center-based program in which parent participation was encouraged and where home visits occurred at least three times per year. The second mode incorporated elements of center-based and home-based programming. Children participated in center-based activities two days per week and each family received one home visit each week. The third mode represented a home-based program where home visitors had responsibility for implementing all Head Start services. A total of 174 parent/child dyads participated in the study. Data were collected in two waves over two years. Four measures of learning opportunities were included, multiple sources of measurement were used to assess child outcomes, and four sources of information concerning the parents and the home were utilized in the study. Results suggest that: (1) it is easier to produce parent and home changes through program intervention than it is to produce child changes that are directly attributable to intervention; (2) child changes associated with program modality are marginal; and (3) parent and home changes that appear to be susceptible to intervention are also the best predictors of child posttest scores. Data is displayed in 29 tables, and 32 references are included. Appendixes provide the child measures, the parent measures, and a staff questionnaire for internal use. (PCB)

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Individual and Family Studies

Head Start Delivery Modes Project

Final Report

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An Analysis of the Effects of Three Modes
of
Head Start Delivery

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Administration for Children, Youth, and Families
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INTRODUCTION

Recent reviews and syntheses of research on the effectiveness of Head Start continue to substantiate the potential short-term benefits of regular participation for low-income children, and to some degree for handicapped children, on some measures of cognitive and social development (McKey, Condelli, Ganson, Barrett, McConkey & Plantz, 1985). Longitudinal analyses similarly indicate important intermediate and long-term effects of Head Start and similar early childhood intervention programs (Clement, Schweinhart, Barnett, Epstein, and Weikart, 1984; Lazar, Darlington, Murray, and Snipper, 1982). In the latter case, it appears that early intervention has a strong and continuing effect on children's ability to cope with the basic demands of schooling right through the completion of high school. It also appears that the relationship between such early intervention and the production of long-term effects is not a simple one (Lazar et al., 1982; Woodhead, 1985). Rather, it seems that the short term effects of participation are mediated within a context of other variables in the home and school social environment, both during the period of intervention and throughout the later stages of education.

It is generally hypothesized that this complex relationship involves a combination of the child's susceptibility to environmental input, quantitative variability in the amount of intervention offered, and the breadth of the effort expended to alter the child's context (McDonald, 1986; Clement et al., 1984; Lazar et al., 1982; Woodhead, 1985).

Within Head Start, despite the existence of performance standards, there is considerable variability on these dimensions. Indeed at various times Locally Designed Options have been encouraged in order to accommodate more children and adapt to the geographical and social needs of particular communities. As a result, not all programs follow a single "typical" or "traditional" model of delivery. Programs differ on the amount of time children are directly involved in the planned cognitive curriculum, in the amount of social contact with peers provided, in the level and type of parent involvement, and the number of personnel with whom the children and families have contact. That is, there are variations in type, frequency and intensity of contact under different conditions of program delivery. Unknown is whether there are lower limits to the frequency or intensity beyond which the benefits of the critical program features are lost. When program variations do occur, it also is possible that the patterns and processes through which intervention brings about change also differ. That is, the model of effectiveness may vary. Little or no research has been directed at this question.

RATIONALE

Program Characteristics

The literature suggests that there are important trade-offs made in designing different delivery modes for Head Start services; e.g., those made between child in-class time and time spent with parents (or the parent/child dyad) (Hubbell, 1983). Several studies indicate that full day programs have greater immediate effects than half-day programs and that full-year programs are more effective than summer only programs. Furthermore, recent evidence indicates that the number of days that each child is in attendance in Head Start is associated with achievement on the Language, Math, Nature and

Science, and Perceptual Scales of the Head Start Measure Battery (Bergan, 1984).

On the other hand, numerous studies indicate the association between parent participation and the short-term and long-term achievement of their children, though direct causal relations have generally not been established (McKey et al., 1985). Similarly, national evaluations of the Home Start program indicate a number of important relationships. Home Start children, when compared to no-treatment controls, scored significantly higher on indices of school readiness and task orientation, but were no different from children attending more "traditional" Head Start programs. When mothers in the Home Start and Head Start programs were compared, the Home Start mothers spent more time in teaching readiness skills to their children and were more likely to involve their children in simple household tasks. When compared to the controls, the Home Start mothers taught more reading and writing skills to their children, provided more books and common play things, read stories to their children more often, and had a higher rate of verbal interaction with their children. That is, the Home Start mothers had indeed become teachers of their children in the more formal sense.

Since there were no differences in child gains, it would appear that the parental home teaching activity effectively compensated for the reduced time that the children spent in class. Current findings, therefore, would seem to suggest a complementarity between child in-class time and parental in-home teaching time, with decreases in one being compensated for by increases in the other. There are, however, no data currently to support this linear additive model.

Lacking such data, we cannot determine whether mixed models have the same effectiveness, less effectiveness, or greater effectiveness than the more traditional center-based or home-based models. Nor can we tell whether some other curve than a straight line best expresses the relationship between child in-class time and parent teaching time.

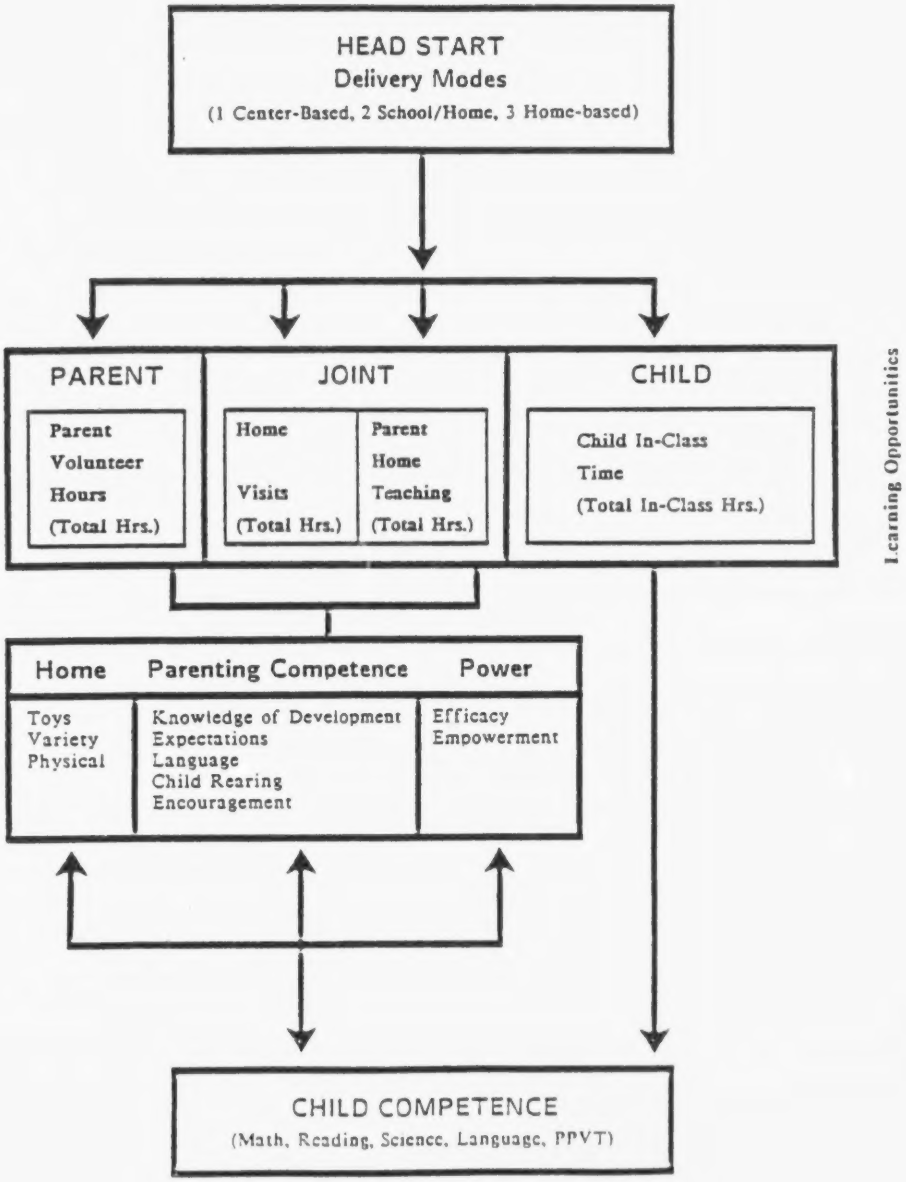
Finally, the literature suggests a complex model of how and why long-term effects of Head Start and Home Start programs are achieved. In essence, this model suggests that:

1. Program exposure time for both children and parents needs to be considered.
2. Program exposure involves both the amount of contact (duration and frequency) and contact quality (intensity and structure), which together serve to establish the number and quality of learning activities experience.
3. Some critical relationship exists between parent learning opportunities experienced and the competency of both children and parents.
4. The short-term competency gains of both children and parents, in turn, affect the response of the subsequent school environment to the child (and vice versa), ultimately leading to further success in school and other life ventures.

This interactive model is depicted in Figure 1.

Given the complex nature of the findings to date, it seems important for both theoretical and program policy reasons that the limits of the critical feature variables be explored within a framework that incorporates an understanding of the processes that might lead to long term effects. Hence, this exploratory study was undertaken to compare three alternative

Figure 1


HEAD START
Delivery Modes
(1 Center-Based, 2 School/Home, 3 Home-based)
PARENT
Parent Volunteer Hours (Total Hrs.)
JOINT
Home Visits (Total Hrs.)
Parent Home Teaching (Total Hrs.)
CHILD
Child In-Class Time (Total In-Class Hrs.)
Learning Opportunities
Home
Parenting Competence
Power
Toys
Variety
Physical
Knowledge of Development
Expectations
Language
Child Rearing
Encouragement
Efficacy
Empowerment
CHILD COMPETENCE
(Math, Reading, Science, Language, PPVT)

delivery modes of Head Start in terms of the actual learning opportunities they provided and to determine their effects on a range of child and parent variables.

Similarly, the complex relationship between home and program variables is not clear. Though the relationship seems to involve a combination of the child's susceptibility to environmental input, quantitative variability in the amount of intervention offered, and the breadth of effort expended to alter the child's developmental context, the exact nature of the relationship, within alternative program modes, needs to be determined.

Family Learning Environments

For all children there are inherent risks and opportunities in their family's physical and social environments (Garbarino, 1982). Opportunities exist when the family environment provides for adaptive, growth enhancing experiences at some optimal level for the child's current developmental status. Risks to development can come from both direct threats and from the absence of opportunities. These can range from obvious biological risks such as those involving abuse, inadequate diet, unsanitary or unsafe conditions, to those that are more subtle involving psychological damage or deprivation (Peters & Kontos, 1987). Often they involve the interaction of several factors. Assessment of the risks and opportunities for a particular child requires an understanding of the attributes of the child and the salient features of the family context. Describing the family context and assessing its risks and opportunities allows estimation of the probabilities of certain developmental outcomes. It does not guarantee them. However, if the risks of a particular family environment far exceed the opportunities, the probability of delayed or distorted development is great. Under such circumstances some form of intervention seems warranted.

Increasing learning opportunities or reducing risks may be accomplished through introducing the child to a new, enriched learning environment outside the home where professionals who understand the developmental needs of children can create planned learning environments or through changing the child's existing and enduring home environmental context. The latter would seek to reduce physical, psychological and health hazards and increase the type and range of stimulation and support available for the child's development.

The research on changing the child's family learning environment has generally gone under the rubric of "early experience" and has focused primarily on the child's cognitive development. The basic premise of this research is that "insufficient or improper environmental stimulation causes cognitive deficits" (Cocking, 1986). The recent extensive review and discussion of the early experience literature by MacDonald (1986) makes it clear that it is not that simple. He concludes that the data on cognitive development "do support the existence of long-range effects of early experience variables in some cases," but that "intensity of ecologically appropriate stimulation in affecting behavior change" needs to be emphasized (p. 120). If the risks of the home environment have not been eliminated, any cognitive changes induced in the child are not likely to endure. For these reasons, most supporters of early intervention efforts have encouraged a dual attack that both supplements the child's environment through experiences outside the home and works toward changes within the home to create a home environment that supports the gains achieved externally (Bronfenbrenner, 1974).

Support for this position comes from both the longitudinal analyses of Head Start and similar programs (e.g., Clement, et al., 1984; Lazar, et al., 1982) and from research on the relation of home environmental variables to later intellectual functioning. For example, Elardo, Bradley, and Caldwell (1975) have studied the relationship between the child's IQ at age 3 and home environmental variables assessed at ages 6, 12 and 24 months of age. Their findings show that home environmental measures at age 6 months do not significantly relate to infant's scores on the Bayley Mental Development Scale at 6 months or 12 months of age. However, there is a significant relationship between these home measures taken when the child was 6, 12, and 24 months of age and the child's subsequent Stanford-Binet IQ score at age 3 years. At age 6 months, factors related to the physical and temporal organization of the home correlated significantly with the Stanford-Binet score at age 3; at ages 12 and 24 months the factors relating to the Stanford-Binet IQ at age 3 included the variety of age-appropriate learning materials that the mother provided and the mother's encouragement of developmental advances. These data suggest that the home environment measures (HOME Scale) were tapping factors that were prerequisite to later intellectual development.

Such research suggests that child-environment relationships may be modified, at least to some degree, if an intensive effort to do so is initiated.

Parent-Child Relationships

Research has often linked parental expectations to children's academic success (Hess, Holloway, Dickson, & Price, 1984; Henderson, 1981). Several alternative explanations have been offered to try to explain how parental expectations translate into child outcomes. Included have been emphasis on the processes of modeling and identification with the parent, parental involvement with learning, and simple encouragement and support. Early on Kagan and Moss (1962) proposed that children's identification with their parents causes them to imitate their parents by adopting their values and attempting to live up to their parents' expectations. Henderson (1981) combined parents' goals and expectations into a single construct called "achievement press" which he saw reflected in parental standards for school success as well as in interest and involvement in the child's educational experiences. The notion suggests that "achievement press" on the part of parents translates into "achievement motivation" on the part of the children. Trudewind (1982) attempted to identify specific ecological determinants of individual differences in achievement motivation, particularly in the areas of stimulation found in the home, direct help with homework, stimulation from social contacts, speech training, opportunities for novel experiences outside the home, and parental achievement pressure.

Achievement press in the family system varies significantly across families. It is particularly low in those families that have a long history of operating at or below the poverty level (Belle, 1983). It has been suggested that within such families the parent's feelings of powerlessness and inferiority extend to the child/school relationship and depress both achievement expectations and effort (Kamii & Radin, 1967; Hess, 1968). Thus, since their origins, the thrust of many intervention programs, including Head Start, has been to increase the "empowerment" of parents.

Parental expectations and a sense of efficacy in childrearing are influenced by a parent's knowledge of child development. A realistic understanding of normal development permits parents to make reasonable demands on the children and to offer appropriate stimulation. Unrealistic demands, either too high or too low, can have deleterious effects. Excessively high demands can lead to both parental disappointment and discouragement on the part of the child. Excessively low expectations may lead to an excessively protective environment and a lack of exploration opportunities for the child. Both can lead to inappropriate levels of environmental stimulation. A parent's ability to respond appropriately to children's signals, one of the features of the home environment deemed important to optimal cognitive development, would also seem to be based on an adequate understanding of normative development (Rutter, 1985).

The research in this area suggests the need for considering the specific parental (particularly maternal) variables being analyzed. The maternal variables included by Hess et al., (1984) encompass more than the physical environment and generalized enrichment of the home. Two of their most powerful predictors of later school success were maternal language and child rearing practices.

The focus on maternal language has a long history in the early intervention literature. It became a part of the early deficit argument for explaining why low-income children do not fare well in the schools (Bereiter & Engelmann, 1966). Although many of the culturally biased underpinnings of the positions of the 1960's research have been discarded, current empirical work continues to support the notion that parental language is important. The use of grammar and vocabulary relating to abstract concepts and the encouragement of verbalization followed by corrective feedback remain important predictor variables of children's subsequent school success (Price, Hess & Dickson, 1981; Dickson, Hess, Miyake, & Azuma, 1979).

Other childrearing practices have more frequently been studied in relation to the social competence of the child. Social competence as a construct is multifaceted and has proven somewhat elusive in the child development literature. However, social competence as demonstrated by the child's independence in learning activities and self-motivation has been shown to be related to cognitive development and school success (Baumrind, 1971; Peters and Raupp, 1980).

Baumrind (1967) has identified three parental authority patterns: authoritative, authoritarian, and permissive. Authoritative parents are characterized as warm, rational, receptive to the child's communication, and controlling, but simultaneously supportive of the child's developing autonomy. In contrast, authoritarian parents are characterized as detached, controlling and less warm in their behavior. Permissive parents are characterized as non-controlling, non-demanding, and relatively warm. In her studies, the children of the authoritative parents fared best intellectually and had higher levels of achievement orientation and self-motivation. The underlying processes were found to be subtle ones. The authoritative parent made definite behavioral demands on the child but based them on reason rather than authority per se, and encouraged discussion of the issues. This practice encouraged the child to reason, make choices, and evaluate alternatives. Authoritarian parents tended to demand conformity and discourage discussion. The permissive parents were non-punitive and acceptant of the child's impulses, desires and actions. The authoritarian parent, therefore, seemed to decrease participation and exploration on the part of the child and induced a sense of external control while the permissive parents provided little direction or guidance for the child's behavior. Both tended to decrease the child's achievement motivation.

The warmth-hostility dimension suggested by Baumrind has been found by other researchers to be important to achievement orientation and academic success. Both maternal (Hess et al., 1984; Turner & Harris, 1984; Manley, 1977) and paternal (Lynn, 1974; Peters and Stewart, 1981; Lewis & Sussman, 1986) warmth has been found to relate to child success.

The literature, therefore, suggests several variables in the parent-child relationship that are particularly important for intervention through programs such as Head Start. It appears that for some children it is essential to create a discontinuity in the pattern of parent-child relationships by bringing about changes in the areas of parental knowledge of child development, expectations, language and child rearing practices. Further, it seems important that parents gain a sense of efficacy in the role they can play for their children. These variables, in turn, should produce greater encouragement for achievement and realistic levels of achievement press within an enriched and supportive environment. To what degree the various alternative delivery modes of Head Start bring about such parental change is unclear. Yet, an analysis of the processes by which such changes are affected is central to the understanding of the hypothesized model for the working of early intervention programs.

OBJECTIVES

Given the above background, it seems important for both theoretical and program policy reasons, that an analysis of the critical features of different delivery modes be undertaken to:

1. Compare the effects of different delivery modes on the immediate outcomes for children and parents, and
2. Explore the pattern of effects both within and across modes in order to ascertain how the process works.

The study reported here, conducted over a two year period, provides a preliminary analysis of these issues. The analyses undertaken have been guided by the two objectives listed above.

METHODS

Sample

A total of 174 parent/child dyads participated in the study. Data were collected in two waves over two years. The Wave 1 sample included children who entered their program during the first year of the study, (N=108) some of whom left the program at the end of that year and some of whom continued for a second year. Wave 2 data were from children who entered their respective program during the second year of the study and who completed that year (N = 66). Returnees were children who entered the program during the first year of the study and who participated in their respective Head Start program for two full years (N = 52). Six children dropped out during the first year of the study, 5 returnees dropped out during the second year, and four 2nd Wave children dropped out. The breakdown of the final sample of children by wave, age of entry into the program and sex appears in Table 1.

All subjects lived in rural communities and were from low-income, Head Start eligible families. Participation of children and their parents were solicited with the full cooperation and encouragement of the Head Start staff. During Wave 1 data collection three participation refusals occurred in the Traditional program sample, two in the School/Home group, and one from the Home-based group. No refusals to participate occurred during Wave 2 recruitment.

Head Start Delivery Modes

Three Head Start delivery modes were studied. All three were ongoing existing programs operated by two experienced Head Start grantees.

Traditional. The first mode represented the most traditional mode of Head Start programming. This was a five day per week, half day (4 hours), center-based program in which parent participation was encouraged and where home visits occurred at least three times per year (34 weeks). Two classrooms with an average enrollment of 18, each staffed by a teacher and aide or parent volunteer were involved. The teachers used a planned curriculum to organize their activities and sought to provide an array of individual, small and large group cognitive and social activities for the children. In the two classrooms studied, a teacher and an aide were present at all times. Often a participating parent was present as well. A typical set of daily activities included breakfast, a concept-oriented circle time, approximately 45 minutes of free play organized by activity areas, a story time and a recall of the day's events, a music activity, lunch and outdoor time. Planning was on a daily, weekly, and yearly basis.

Home/School. This mode represented a mid-range delivery model incorporating elements of both center-based and home-based programming. Each child had the opportunity to participate in center-based activities two days per week, and each family received one 90 minute home visit per week. Each teacher/home visitor was assigned sole responsibility for both center-based and home visit services to approximately nine children and their families. During in-class times a structured curriculum similar to that described for the Traditional program was followed. The curriculum was supplemented during home visits though that time also served for the delivery of other Head Start mandated services (eg., social services). In this program a major effort was directed towards informing parents (usually, but not exclusively mothers) concerning the range of services available to them in the community and in encouraging them to be advocates for their children and families. Parents were encouraged, in addition to their home teaching, to participate as volunteers in the classroom component of the program and each in-class session had at least one (but not more than two) parent present. Children with developmental disabilities or delays also received additional services (e.g., speech therapy) both in the home and in the center. Since there was one staff member for approximately nine children and their families, four groups were enlisted for the study.

Home-based. This represented a home-based, home visitor program where home visitors have responsibility for implementing all Head Start services. Home visitors had particular responsibility for implementing the educational component of the program which they did by providing curriculum guidance, materials and specific lesson assignments for parents to carry out with their children. The curriculum was an adapted version of the Portage program. During home visits procedures were modeled and practiced. Records were kept concerning the number of activities completed between visits, the time spent and the success of the activity. Group sessions to promote socialization goals for the children occurred two times per month at a central location. Each group session was approximately three hours in duration and included a snack, a short circle time, a free play period, a second group time and lunch. Scheduling was handled flexibly however. Parent education/discussion sessions were scheduled to parallel the children's group sessions. Each home visitor served from nine to twelve families.

Research Controls. The projected exposure represented by these three delivery modes is represented in Table 2. Since this research was superimposed on ongoing service programs, the research team had no ability to govern curriculum, staff selection, service locales or assignments of subjects to delivery modes.

Table 2 also indicates the intended control, to the degree possible using existing, ongoing service programs, of the variables of child/staff ratio, staff qualifications, the basic curriculum, and the range of services provided.

Measures

Table 3 summarizes the measures used to assess learning opportunities, child outcomes and parent outcomes.

Learning Opportunity Measures. Four measures of learning opportunities were included:

1. Child In-Class Hours. This was the number of hours of in-class or socialization group attendance in which the child actually participated, based upon program records.

2. Home Visit Hours. This measure is the number of hours recorded during which the Home-visitor or other paid Head Start employee was present in a particular child's home, working with the child, the parent, or both, again obtained from program records.

3. Parent Volunteer Time. This represents the number of hours recorded by a particular family (mothers, fathers, and other adults) devoted to specific Head Start activities other than home teaching. These included such activities as participation on policy council, working with children in the classroom, helping on field trips, etc., again obtained from program records.

4. Parent Home Teaching Time. This represents the self-reported number of hours that parents claimed to work with their children on "educational" tasks, either planned or impromptu. The data were obtained through parent interview.

In essence, the three Head Start delivery modes were hypothesized to vary in the intensity of the parent, child and joint parent/child learning opportunities they offered.

Child Measures. Multiple sources of measurement were used to assess child outcomes. These included: individually administered tests (Head Start Measures Battery [HSMB] and Peabody Picture Vocabulary Test [PPVT]), classroom observations, teacher ratings, and kindergarten records. The assessment team for the individual measures and observations consisted of a field data coordinator and two field testers.

Specifically, the measures included:

1. Peabody Picture Vocabulary Test (Dunn & Dunn, 1981) Form L. Scoring done by project staff yielded a Raw Score, and a Mental Age Equivalent (PPVT-MA) for each child. The latter was used as the principal one for analysis, serving as an indicator of general intellectual ability.
2. Head Start Measures Battery (Bergan, 1984). The HSMB has six subtests assessing the child's developmental achievement in the areas of:
   - Language. This scale taps the child's understanding of story meanings, use of words to communicate, ability to follow directions, and understanding of language rules.
   - Math Skills. This scale includes items designed to assess the child's ability to identify and work with numbers, count, add and subtract sets, and conserve numbers.
   - Nature & Science. This scale includes items on discrimination, classification, sequencing, and prediction as well as factual knowledge about plants, weather, etc.
   - Perception. This scale has items on shapes and shape matching, colors and color matching, creating and matching patterns from memory and the like.
   - Reading. This scale involves items on identifying and matching letters and letter patterns, sentence completion, and auditory processing.

- Social Development. This scale deals with rules for social behavior such as taking turns, ownership and sharing and with expressions of emotions.

Detailed analysis of the measures, including information on reliability, validity and factor structure appears in Bergan (1984). Scoring of the HSMB was done through a contract with the University of Arizona.

3. Behavior Survey Instrument (Katz, Peters, & Stein, 1968). This point-time sampling, category system was used for observing children's task orientation behavior in group settings. The procedure used calls for a randomized sequence of observations focusing on individual children. Categories of behavior observed included: Attention to Teacher, Strongly Intent on Individual Work, Intent on Individual Work, Attention to Other Child, Social Work or Engagement, Disinterest, Aimless Wandering, Intent on Non-Teacher Prescribed Work, and Disruptive. Inter-observer agreement among the three observers was calculated immediately after initial training and reaffirmed at the beginning of each measurement cycle. Average Inter-observer agreements (Agreements/Agreements + Disagreements X 100) ranged from 80 - 97%. A minimum of ten observation of each child's behavior was recorded during each measurement cycle. (See procedures below.) Child data used in analyses were the percentage of observed behavior by category (Frequency of category/total observations).

4. Teacher Rating Scale (Peters & Stein, 1966). This measure was modified to remove sexist language and make it relevant to the current Head Start situation. The scale consists of two parts. Part A is a 20 item Likert scale for rating the child's behavior in a variety of routine situations ranging from such things as sharing toys to adapting to routines. Part A is viewed as a measure of general preschool adjustment. Part B is an 8 item scale for rating a child's development in the domains of language, fine and gross motor development, dependency, etc., and provides an assessment of the child's development within the local situation. Each teacher/home visitor was requested to complete both parts for each child in their charge at each measurement point. Reliability assessments produced Cronbach's alpha of .88 and .87 for the two scales respectively.
5. Kindergarten Records. The public schools which the Wave 1 children attended upon "graduation" from Head Start provided information about the placement of the children at the end of their kindergarten year. These data included: Kindergarten placement, special education services, and placement for the following year (e.g., Kindergarten retention, special placement, or regular first grade).

Parent/Home Measures. Four sources of information concerning the parents and the home were utilized in this study: The Knowledge of Development Scale (KDS), The Parent Expectation Scale (PES), the Home Observation for

Measurement of the Environment (HOME) and a Parent Interview and Questionnaire (PIQ). From these sources of data a variety of measures were obtained. Specifically these included:

1. Knowledge of Development (adapted from Duscewicz, 1973). This scale includes items about knowledge of normal and atypical early childhood development. A later version of this scale (Busch, 1979) was specifically designed for parents. Several items were deleted to make the scale more appropriate for Head Start circumstances. Items included those testing for an understanding of the language and concepts of development, processes of development, and the parent's beliefs about how developmental changes come about. Scoring for the measure indicated the number of items correct, the number of items incorrect, and the number of items on which the respondent was unsure. Cronbach's alpha ranged between .68 and .82 for the three derived scores across testings.

2. Parental Expectations Scale (originally devised by Jensen and Kogan [1962] and modified by Busch, [1979]). This measure seeks to determine parental expectations about their own child's future development. Three items were deleted from the Busch version to make the scale less threatening to parents and easier to administer. The scale is suitable for parents of developmentally delayed or disabled children as well as those following a typical course of development. The scale covers 10 domains of expectations: self-care, education, schooling, literacy, employment and income, social interaction, mental

ability, physical ability, physical skills, and family management. Busch reported a KR-20 of .92. For current purposes, since the parents held relatively undifferentiated expectations for the young children, the scoring was revised to yield expectation scores across all domains, that indicated the respondent's endorsement of HIGH aspiration items, MODERATE aspiration items, and LOW aspiration items in general. Only LOW and HIGH expectation scores reached acceptable levels of KR-20 and Test/Retest of reliability (>.50).

3. Home Observation for Measurement of the Environment (Caldwell and Bradley, 1979). This measure has eight subscales: Toys, Games, and Reading Materials (HT); Language Stimulation (HL); Physical Environment (HEN); Pride, Affection, and Warmth (HPR); Stimulation of Academic Behavior (HAC); Modeling Social Maturity (HSOC); Variety of Stimulation (HVAR); and Physical Punishment (HPUN). It also yields a total score (HTOT). Scoring procedures followed those established by Caldwell and Bradley. Reliability assessments within the current sample, averaged across testings, ranged from .30 for Variety of Stimulation to .81 for Physical Environment. Total score reliability was .85.
4. Parent Interview/Questionnaire. This original questionnaire consisted of fifteen "yes" or "no" questions each followed by open-ended follow-ups. The questions pertained to what parents felt they had gained as a result of their participation in Head Start. Data from responses provided information about two

issues. First, the questions provided information, from the parent's perspective, concerning the number of hours they had worked with their children in the home on "educational activities, on a weekly basis. Secondly, two parent "self-efficacy" variables were derived from grouping responses to particular questions. These variables were:

- Child Rearing Efficacy. Seven of the questions pertained to the parent's knowledge of their own child's development, their role in the education of their child, their ability to deal with problems that might arise in their child's future educational experiences, and their confidence in their ability to continue to help and play a role in their child's education. Parents' open-ended responses and positive responses were summed across the seven questions to yield a score for the parent's perceived sense of Childrearing Efficacy. (Cronbach's Alpha = .87)
- Empowerment. An additional eight questions focused on the parent's perceived ability to cope with family problems, their knowledge of community resources including health care and nutrition, their friendship network, and their sense of themselves as competent persons. The responses to these questions were categorized and positive responses were summed to establish an Empowerment score. (Cronbach's Alpha = .90)

Three other measures were derived by reorganizing responses from the HOME. These were:

- Maternal Language. This measure was derived by selecting twelve items from the HOME that pertain to mother's usage of appropriate expressive and receptive language in the mother/child interactions. (Cronbach's Alpha = .70)
- Childrearing (warmth/hostility). This measure was derived from thirteen items on the HOME dealing with the expressive nature of interaction. (Cronbach's Alpha = .75)
- Encouragement. This contained ten items from the HOME dealing with endorsement or encouragement for exploration and achievement. (Cronbach's Alpha = .75)

Procedures

Child assessments involved the following. After parental consent was obtained the testing team of three persons were given assignments. Individual child measures were administered on-site during in-class times or during specially organized group times. Testing circumstances were not always ideal, occurring in the speech therapy rooms where possible, in corners of large classrooms, in clothing rooms or in hallways when necessary. The PPVT was usually administered as the first test in the battery since it was the least threatening and most easily administered of the individual measures. Children were usually administered the PPVT and two subscales of the HSMB during one session and two scales of the HSMB in two subsequent sessions. Each session was under a half hour in duration. With some children it was possible to administer three or even four of the HSMB subscales during a single session. Testers used their discretion in determining the responsiveness of the children in such cases. No children were forced to proceed when they were inattentive or tired. Children were selected for testing on a random basis.

The parental measures were done by the family's assigned home visitor/teacher. Home visitors were trained by the Project's Data Collection Coordinator during 1-1/2 hour sessions for each site. A total of 17 teachers/home visitors or aides were involved in data collection. Data collection on families and homes was accomplished either during a separately scheduled home visit or by extending the regular home visit beyond the usual ninety minutes to incorporate both purposes. The usual procedure had the parents (usually the mother) fill out the PES and the KDS first and then a more open interview procedure was used to gain the information required for the HOME and the PIQ. Since the personnel doing the family assessments were previously known to the parents and had been in the home before, rapport was good and communications were generally quite open. All parents in the sample were able to complete the PES and KDS with minimal help from the home visitor/teacher.

There were four measurement cycles in the study. Year one had two cycles (fall and spring) and year two had two cycles (again fall and spring). Within each cycle child testing, teacher ratings and family assessments proceeded simultaneously. Classroom/group session observations were worked into the testing schedules but usually followed individual assessments. Timing of events was not always under the control of project staff because of absences and Head Start program schedules, but every effort was made to a) maximize the time span between cycles, and to b) keep the timing between cycles equivalent for the three program modes.

DESIGN AND ANALYSIS

The objectives of the study called for two basic analyses of the data each with several sub parts.

Comparative Analysis of Three Program Modes

The comparative analysis of the three program modes was accomplished in the following fashion:

1. Learning Opportunities were compared across mode for:
    a) First year of study
    b) Second year of study

These analyses were undertaken to affirm that planned program differences did exist.

2. Child and parent outcome data across mode and time were analyzed using multivariate techniques for:
    a) First Wave subjects,
    b) Second Wave subjects excluding those children and parents who returned to the program for a second year,
    c) Returnees, those children and parents who participated in their respective programs for two consecutive years (i.e., across four cycles of data collection).

Process Analysis

Process analyses called for the analysis of the model of Head Start effects both within each program mode and across all subjects. This required testing a series of prediction equations for both child outcomes and for parent outcomes.

RESULTS

Program Comparisons

Learning Opportunities. Tables 4, 5, and 6, present the results of the MANOVA for the measures of learning opportunities. Table 4 presents the results for the first year of the study; Table 5, for year two; and Table 6, presents the data for those subjects (returnees) who participated in both years. All three tables indicate that the three groups differed from one another in child/classroom contact hours with the Traditional program far exceeding the other two groups, and the Home/School group exceeding the Home Based group. The Home/School and Home Based group were equivalent on home visit hours and both significantly exceeded the traditional program on this variable. The Home/School group exceeded both other groups on parent volunteer time during the first year and both the Home/School and Traditional programs exceeded the Home Based group during the second year. Finally, based upon parent self-reports, the Traditional and Home/School program parents spent more time in instruction with their children during the first year than did the Home Based parents. This finding was not replicated in the second year data nor in the data from just the returnees and should be interpreted cautiously.

With the exception of the Parent/Home Instruction variable, these data confirm the expected differences and similarities among programs.

Child Outcome. Analyses of child outcomes are presented in Tables 7A, 7B, 8A, 8B, and 9, for the HSMB, PPVT, and Teacher Ratings. Tables 7A and 7B present the analysis of the First Wave data (year 1). As may be seen in the Table, the three groups were equivalent on these measures at pretest and at post test. All groups made significant gains from pretest to post test. It is clear that there were no significant mode X time, cohort X time, or cohort X mode X time interactions. While 3- and 4-year-olds differed both at pretest and at post test on almost all measures the rate of change for both groups was essentially equivalent no matter what program they were in.

Tables 8A and B present the findings of the MANOVA for second year data by mode, cohort, and time. In these Tables, the results for the 3- and 4-year-olds represent a direct replication of the data for Wave 1 presented above. These Second Wave children also experienced one year in the program. Returnees represent those children from Wave 1 who spent a second year in their respective program. Several findings are worth noting.

1) The MANOVA for cohort effects, at both pre- and post test were not significant in the second year data though they were significant in the first year. Analyses of the three Tables (7, 8Aand B) suggest that children in the second year sample, particularly the three-year-olds, entered the program at a higher functioning level (or at least tested better) on almost all measures thereby decreasing cohort effects.
2) The multivariate F's for the mode X time and mode X time X cohort interactions did reach significance. Univariate analyses indicate that:
    a) On the HSMB Reading measure Home/School program children and Traditional program children made greater gains than did the children in the Home Based program. These gains are primarily attributable to the 3-year-olds.

b) On the HSMB Math measure, again, the Traditional children made greater gains than did the children in the Home Based program and, again, the 3-year-olds were the major contributors to this difference.

c) On the Teacher Rating, Part B, the Traditional program children were rated as making greater gains than were the 3-year-olds in the other two programs. Further, in all three programs, the returnees were rated lower at post test than they were at pretest, though the individual differences are not significant the pattern contributes to the cohort X time and mode X cohort X time interactions.

The reader should note that these findings, though significant, are based on a very small N when the analysis is at the three-way interaction level.

Finally, Table 9, presents the MANOVA results for the returnees across all four cycles of testing. As may be seen in this Table the returnees made continuous gains on all measures except the teacher ratings (reflecting in part a change of teachers). The groups were equivalent at pretest and at the final post test. The multivariate F was not significant.

In essence, the First Wave data and the analysis of the returnee's longitudinal data indicate that all children made gains (except on Teacher Rating Scale B) but that there were no significant differences between programs. The Second Wave replication did, however, uncover mode X time and mode X time X cohort interactions on the reading and math measures. These two measures indicated that greater gains were made by the children in the

Traditional and Home/School programs in the areas of reading and math than were made by children in the Home Based program. These differences were primarily found for 3-year-olds.

Tables 10, 11, and 12, present the results for the observed behavior of the children in classroom or group sessions. Limited entries in some categories prohibited analysis by cohort.

Table 10, presents the First Wave data. The multivariate F's at pretest and post test reached significance indicating differences across mode in the children's behaviors of Strongly Intent on Individual Work and Social Work at pretest and at post-test. At both pretest and at post test children in the Home Based program's group sessions were more likely to be engaged in individual work and less likely to be engaged in social work than the children in the Traditional program or the Home/School program (post test only). At post test the children in the Home Based program were observed to be less likely to be attending to the teacher and more likely to be watching another child. Children in the Traditional program were more likely to be attending to the teacher or to be disinterested in what was going on.

The critical mode X time interaction multivariate F did not reach significance.

Table 11 includes data from second wave children as a replication. Only the multivariate F at pretest reached significance. Again, the univariate analyses suggest the Traditional program children were more likely to be attending to the teacher while the children in the Home Based model were more likely to be attending to another child. Children in the

Traditional program were more often seen to be disruptive at the pretest observation and, along with the Home/School children, they were more likely to be observed to be disinterested than were the children from the Home Based program.

Table 12 presents the longitudinal results, across the four measurement cycles, for the returnees. The pattern of results is essentially the same as for the two previous analyses. There is no significant mode X time interaction. But at any one period of time, children in the Traditional program were more likely to be observed engaged in social work (active interactions with other children) or to evidence disinterest than were children in the Home Based program.

Kindergarten Follow-up. Tables 13 and 14 present the Chi Square analyses of the follow-up data obtained from school records on 25 of 56 First Wave children who left Head Start at the end of Year 1. Table 13 presents the Kindergarten placement of the children. As may be seen from this Table, 21 of 25 children were placed within "normal" kindergarten placements while 4 children received "special placements." The difference in placements across Head Start modes was not significantly different. At the end of kindergarten placements into first grade classrooms did differ at a level that approaches significance. More children from the Traditional program received special placements than did children from the other two programs. These first grade placements do, however, reflect the loss of one subject who transferred out of the area during the kindergarten year and was lost to the sample.

Summary. On child measures there are few significant differences across programs. Only in Wave 2 data did it appear that there were mode X time differences in the HSMB Reading and Math scores with the Home Based program making fewer gains than the children in the other two programs - and the major contributors to these differences were the 3-year-old children. The observation data suggest that in group sessions the Traditional children were more likely to engage in social interactions with peers and to be attending to the teacher than are the children in the Home Based program. They are also more likely to be disruptive or disinterested. The differences seem to reflect the organization and curriculum of the specific programs. There is some indication that more children from the Traditional program received "special" placements than did children from the other two programs.

Parent Outcomes. Multivariate analysis of variance results for parent and home measures are found in Tables 15A and B, 16, and 17.

Table 15B indicates that First Wave parents, in general, made gains on the HOME Scale domains of Toys, Games and Reading Materials, Language Stimulation, Physical Environment, Pride, Warmth and Affection, Academic Stimulation, and use (lower) of physical punishment. They also increased their expectations for their children's future accomplishments. They were less uncertain about their child development knowledge but were more likely to be incorrect in their responses to the knowledge questions.

These findings are, however, further amplified by looking at the interactions of Mode X Time. The results are most clear in Table 15A. The results indicate the following:

1) The Traditional Program and Home-School program parents scored higher on the availability of Toys, Games and Reading Materials at pretest than did the Home-Based program, but there was no significant difference between the three modes at post test.
2) The Traditional Program parents scored higher on the provision of academic stimulation than did either of the other two groups at pretest, but again at post test, there were no significant differences between the groups, indicating greater gains for the Home/School and Home-Based program than for the Traditional Program.
3) For Variety of Stimulation and Physical Punishment the same pretest pattern existed, but was not significant. At post test the Home-Based program scored significantly higher than the other two groups. These greater gains contributed to the significant Mode X Time interactions.
4) For Modeling and Encouragement of Social Maturity a somewhat different pattern resulted. At pretest the Home-Based program scored higher than the other two groups and while the Home-based and Home/School programs improved their scores over time, the Traditional program parents scores went down creating the Mode X Time interaction.

The Mode X Time interaction for the KDS was also significant at the .05 level. The major contributors to this interaction were the increase in Incorrect Knowledge responses of the Home/School group, and the decrease of uncertainty of the Traditional and Home-Based groups.

The Mode X Time interaction for the Parent Expectation scale was not significant.

The Second Wave replication of these findings is found in Table 16. These data indicate that in general across modes gains were made in Toys, Game and Materials, Language Stimulation, Academic Stimulation, Variety of Stimulation, and Warmth. The Home-Based program started lower and made the greatest gains on Toys, Games and Reading Materials, and Academic Stimulation. The Traditional program made the greatest gains in reducing the use of physical punishment and offering warmth, pride, and affection, though at post test, they remained lower than the other two groups.

Finally, Table 17 provides the data for returnees across the four points of measurement. Over the two year period, only Modeling and Encouragement of Social Maturity was found to be significant. The Mode X Time interaction indicates that over the four testing points, the Home-Based program parents continued to improve on this variable, while the parents in the other two programs remained stable.

Assessments of parents' feelings of Childrearing Efficacy and Empowerment were made through interviews at the end of the program year. Table 18 reports the findings for Year 2. (No differences across mode were found for Year 1). As indicated in Table 18, no differences in Empowerment were found across modes or across cohorts. Reported Childrearing Efficacy did differ across programs with both the Traditional and Home/School programs reporting higher levels than the Home-Based program. The significant Mode X Cohort different resulted primarily from the differences of parents of 4-year-olds across mode.

Summary of Parent Outcomes. Parents in all three programs showed consistent improvement in a number of variables. Strongly replicated results are those for Toys, Games and Reading Materials, Language Stimulation, and Academic Stimulation. The analyses of the interaction effects indicate that the Home-Based group made the strongest, most consistent, and widest ranging gains over the time of the intervention.

Process Analyses. To determine the processes that seem to be at work both within and across Head Start modes, parallel regression analyses were used. A separate equation was deemed necessary for each child outcome within program type as it was hypothesized that different types of information might be acquired by children in different manners within each program. Because of the number of analyses involved in relation to sample size, the analysis of child outcomes was restricted to the HSMB Reading, Math, Language, and Science and Nature measures, and the PPVT - Mental Age measure.

A separate analysis of five equations predicting child outcomes from the total sample was also conducted to determine an overall model of influences on child learning.

Predictors of Child Outcomes. The factors which contribute to child outcomes - as defined by the model - stem from three sources: 1) The child's ability level upon entering the program; 2) the learning opportunities provided by the program; and 3) the competencies and environmental factors associated with the parents. As the learning opportunities were, in some cases, provided to parents with the objective of altering parent factors which would, hypothetically, in turn, alter child outcomes; parent pretest and post test factors were both entered into the equations. Parental feelings of Childrearing Efficacy and Empowerment could not, however, be included in the regression due to a limited number of responses (N = 55) which would have lowered the degrees of freedom below the level deemed necessary for a meaningful analysis. The general model, then, was as follows:

Learning Opportunities + Child Pretest Scores + Parent Pretest Scores +
Parent Post Test Scores = Child Outcomes

In order to derive the most meaningful equations while still retaining adequate degrees of freedom for each analysis, the following procedure was employed. First, all of the factors within each source category were regressed on each child outcome within each program and over the total sample. Secondly, those factors whose coefficients in the first level of analysis were significant at or above the .10 level, were selected for entry into the final equations. All of the variables appearing in the final equations have, therefore, approached significance at the primary level of analysis and are, hence, deemed worthy of discussion regardless of their significance level in the secondary level.

The findings of these analyses (See Table 19) indicated that the primary influence on child outcomes is child input. This was expected to be the case. Child language appeared to be the dominant factors within the Traditional program, while Reading, PPVT-MA and Science scores appeared to explain more post test variance in the other programs and overall. Other influential factors for the Traditional program children were Child In-Class Hours negatively related to Math post test scores and parental post test High Expectations predicting post test Mental Age.

Within the Home/School Program, the major predictors of children's post test scores (aside from the children's initial scores) were Maternal Encouragement ($p<.05$) and Expectations ($p<.10$) at pretest predicting post test Math scores, Maternal Language at post test predicting children's Reading scores ($p<.10$), and pretest Toys, Games and Reading Materials predicting children's Language scores.

The results for the Home-Based program show the most complex results reflecting the influence of parental and home variables. Children's post test Language scores were predicted by maternal Language scores at both pretest ($p<.10$), and post test ($p<.05$), by the variety of Stimulation provided in the home at post test ($p<.10$), and by Parents' Incorrect Knowledge of Child Development ($p<.05$). The presence of Toys, Games, and Reading Materials in the home at pretest is predictive of post test PPVT-MA.

For the total sample, Child In-Class hours was the best program predictor variable and that predicted only Math achievement at a significant level and that relationship was an inverse one. (This inverse relationship was similarly found for the equations for the Traditional and Home/School programs where In-Class hours were the greatest). Math also was predicted by the presence of Toys, Games and Reading Materials in the home at pretest ($p<.001$).

These results may be summarized as follows:

1) The best predictor of child outcomes was children's initial ability and the best predictors among these were the highly interrelated measures of HSMB Reading and Language, and the PPVT - MA.
2) Program variables were found to have little power in predicting child post test scores with the exception of Math achievement. The program variable most likely to enter the equation was Child In-Class Hours and its relation to child outcomes was

usually negative. That is, children with higher numbers of In-Class Hours scored lower at post test than did children with lower In-Class Hours.

3) The availability of Toys, Games and Reading Materials, Maternal Encouragement, Maternal Language, Knowledge of child Development, and Parental Expectations at pretest were found to predict child outcomes - particularly in the areas of Math and Language.

Predictors of Parent Outcomes. The Head Start program is based on the assumption that parents are the primary teachers of their children and that parent beliefs and behaviors affect child development. Therefore, if positive changes can be induced, positive child development outcomes should follow. In the analysis of the predictors of child outcomes, parent and home factors were, indeed, the second most influential source of prediction in the model. However, it was deemed necessary to examine the determinants of parent post test scores to better validate the given assumptions. The general model tested was

Learning Opportunities + Child Pretest Scores = Parent Pretest Scores = Parent Post test Scores

The sample for the first analysis consisted of all First Wave subjects and represents the relationships present after one year in the program.

The final regression equations predicting parent outcomes were derived in a manner similar to that employed to predict child outcomes: first the sources of influence (Learning Opportunities and Parent and Child input) were regressed on parent post test scores separately, and then those factors contributing significantly to the first level equations were entered into the final equations which appear in Tables 20A through D. Over the total sample, Maternal Encouragement appears to have a positive relationship with Home Visit Hours and with Reported Hours of Home Teaching ($p < .10$). The latter should be expected as these two variables should measure the same behavior as reported by the Home Visitor and the parents. Childrearing Style (warmth/hostility) has a relationship with Child In-Class Hours as does Toys, Games and Reading Materials with Reported Hours of Parent Instruction, probably due to the fact that the most positive change in those areas was shown by the parents of the Home-Based program who received the least In-Class Time and reported the lowest Home Teaching Time. Similarly, this group decreased in High Expectations while the others increased, thus contributing to a relationship between Home Visit Hours and High Expectations. The significant positive influence ($p < .05$) also exists between the child's Language level at pretest and Maternal Encouragement to Learn at post test.

Within the Home-Based program, Child In-Class is a significant predictor of the post test availability of Toys, Games and Reading Materials ($p < .01$) which made significant increases over the course of the program. Home Teaching Time predicts the post test quality of the physical environment ($p < .10$) and is the only significant predictor of mothers' post test language ($p < .05$). Parent Volunteer Hours contributes to the prediction of Maternal Instruction while reported Parent Home Teaching Time bears a positive relationship to both the provision of Toys, Games and Materials as well as High Expectations of Parents for their children.

The parental scores most closely associated with child pretest scores are Toys, Games and reading Materials, and Maternal Encouragement - the same areas in which parents of this program demonstrated greater gains over time than did parents of both other programs. They also demonstrated consistent if not significant (in the final equations) relationships with child post test scores.

Within the Traditional program, Child In-Class Hours is related to Maternal Language and Encouragement to Learn. Parent Home Teaching Time, however, is positively related to post test levels of Physical Environment, Variety of Stimulation, Maternal Language ($p < .05$), Childrearing Style ($p < .10$) and Moderate and Low Expectations. These areas at pretest were related to child post test scores, but not at post test. Children's pretest scores explain a significant portion of the variance in parent post test scores in Variety of Stimulation (Reading $p < .05$), Maternal Encouragement (Math $p < .01$), and Low Expectations (an inverse relationships, $p < .001$).

Child-related behaviors of parents within the Home/School program do not seem to be influenced by Head Start programming as the only relationship evident is between reported hours of parent Home Teaching Time and Maternal Encouragement to Learn, indicating a sort of inter-rater reliability on judgments of the same behaviors by both parents (Reported Hours) and home visitors (Maternal Encouragement).

Children's language predicts mother's language at post test ($p < .05$) and the quality of the Physical Environment is predictive of the child PPVT - MA at pretest ($< .05$) or vice versa.

In an attempt to further clarify these results, a second analysis was conducted. In this analysis, which followed the same general format as that above, two changes were made. First, First Wave data and Second Wave data (excluding returnees) were combined to increase the sample size for the analysis (N = 174). In essence, both groups were assessed on the basis of one year's experience on their respective Head Start programs. Secondly, the equation tested was:

Learning Opportunities + Parent Pretest Scores + Child Post Test Scores +
Child Post Test = Parent Post Test Scores

Child Post test Scores were added to the equation to determine if child change resulting from intervention contributed to the parent post test change. Hence, the equation permitted testing for direct program effects (Learning Opportunities) and indirect program effects (Child Post Test differences) while controlling for child and parent pre-intervention differences. The results appear in Table 21.

Two general findings may be seen in the results. These are:

1) The total amount of Variance in Parental Outcomes explained by the equations is considerably less than was possible for the Child Outcomes. (In some cases, despite the number of variables, the R^2 is not significant).
2) Parent pretest variables are the best predictors of parent post test variables and in many cases these are very specifically measure related with beta's on the diagonals reflecting more an indication of the stability of measurement than a predictor of change.

These general findings suggest a cautious approach needs to be taken in interpretation of the results.

Given the above cautions, the following results are noted:

Within the Traditional program, Parent Home Teaching Time is related to the availability of Toys, Games and Reading Materials, Physical Environment, and Maternal Language with the latter reaching significance in the final equation. Parental holding of High Expectations for the child at post test was positively and significantly related to the child's post test Mental Age, but negatively related to the number of Home Visit Hours received. Parents' Incorrect responses on the Knowledge of Development Scale were positively related to the number of Child In-Class Hours.

This pattern suggests that parents whose children had higher Mental Ages, held higher expectations for their children, were likely to engage in more hours of home teaching and, hence, made more toys, games and reading materials available in a higher quality environment and were more likely to score high on maternal language. These positive characteristics were not, however, related to Child In-Class time and were negatively related to Home Visit Hours. (Perhaps reflecting a staff decision to spend less time in the homes of those who were functioning in positive ways and needed less intervention.)

In the Home/School Program, Child In-Class Hours is negatively predictive of Parental Childrearing Style (warmth) and positively related to Incorrect Responses of Parents to the post test Knowledge of Development test and parents' High Expectations for their child. Children's Reading and Math Scores at post test were negatively related to HOME measures of the Physical Environment and Toys, at post test.

For the Home-Based Program, parental expectations for their children at pretest were the most consistent predictor of parent Post test Scores and this variable was positively and significantly related to parent Home Teaching Time. Child In-Class Time was negatively related to Maternal Language and positively related to the availability of Toys, Games and Reading Materials in the home at post test. Of most note, is the lack of predictive ability for the variables of Variety of Stimulation, Maternal Encouragement, Maternal Language, and Childrearing Style (warmth). It appears that these variables are unrelated to original parental status on the same variables, though they are related to child post test scores on Math, Language, Science, and PPVT - MA. This may indicate the susceptibility of these variables to intervention and their subsequent relationship to child change in this delivery mode.

In the model for the total sample, Home Visit Hours is positively related to Variety of Stimulation in the home and Maternal Language. Child In-Class Hours is positively predictive of parental High Expectations and negatively predictive of Parental Warmth. On the whole, however, parental post test variables are best predicted by parent pretest variables indicating more stability than change as a result of intervention.

Discussion

The first purpose of this study was to compare the effects of different Head Start delivery modes (Traditional, Home/School, and Home-Based) on the children and parents enrolled. The analyses conducted indicated the following:

1) The predicted similarities and differences among the three program modes on Child In-Class Hours, Home Visit Hours, Parent Volunteer Hours, and parent Home Teaching Time were essentially confirmed. Parent self-reports of Home/School Teaching time for the analysis of the First Wave Data indicated the Traditional and Home/School Program parents spent more time in Home Teaching than did the Home-Based parents during the first year. This was not replicated in the Second Wave data nor in the analysis of returnee data. As a self-report measure, it is possible that the questions asked were subject to misinterpretation by parents. For example, it appears that parents in the Traditional program who received the fewest home visits and had no specific home teaching assignments, may have overestimated their impromptu teaching or interpreted the "teaching" variable more broadly than did the parents in the Home-Based program who received frequent home visits and were given specific assignments.

2) Children in the Second Wave, particularly the 3-year-olds, entered the program at a higher functioning level than did children in the First Wave. The reason for this is not clear but likely reflects a combination of selection processes going on within the Head Start program and the testability of the particular children. It is possible that it also reflects improved skill of the data collection staff at getting the youngest children to cooperate.

3) Each of the analyses indicated that all children made gains (except on teacher Rating Scale B) from pretest to post test. The

teacher ratings at post test may have been depressed by teachers taking a more conservative look at the children's development in the spring as they contemplated how the children would fare in their subsequent school placement.

4) For the Second Wave replication only, the Home/School and Traditional program children made greater gains than did children of the Home-Based program on the HSMB Reading Measure. Again, these gains are primarily attributable to the 3-year-olds. Similarly, the Traditional program children made greater gains on the HSMB, the Math measures, and Part B of the Teacher Rating, than did the children in the Home-Based program and again the major contributors to these differences were the 3-year-olds. These differences were not found in either the First Wave data nor in the analyses of the data for returnees. In all three programs the returnees were rated lower at post test than at pretest by their teachers in general development.

5) Observations of In-Class/Group activities of the children across programs indicated different patterns of child behavior. In general, children from the Home-Based program, who had the fewest group experiences, were observed less likely to be involved actively with other children or to be attentive to the teacher, and more likely to be involved in individual activities or to be passively watching another child. Children in the Traditional program, who had the greatest amount of classroom experience were more likely to be attending to the teacher, to be actively involved with other children, or to be disruptive or

disinterested. These differences are reflective of both the organization and curriculum of the programs involved and the experience of the children in the group situation.

6) There is some indication that the children from the Traditional program received more "special" placements in first grade than did the children from the other two programs.

Based on analyses of child data alone one would have to conclude that there are few significant differences across programs. All three programs are effective in the short-term on the measures used here, though without a no treatment control these changes cannot be attributed unquestionably to the programmed intervention. There is some indication that 3-year-olds in the Traditional program made greater gains on Reading, Math, and in general development as rated by the teacher than did the children from the Home-based program. Children from the Home/School program also gained more than the Home-Based children on Reading. The gains are logically related to the Traditional program's children's greater In-Class learning opportunities, greater attentiveness to the teacher, and more active engagement with other children. Similarly, the Traditional program's children's higher frequency of disinterested and disruptive behavior may relate to their subsequent "special" placements.

However, in this study it was possible to go beyond a simple comparison of child outcomes. Analyses of parent outcomes enrich the picture. In general these findings indicate:

1) Parents showed gains on the HOME Scale domains of Toys, Games and Reading Materials, Language Stimulation, Physical Environment, Pride, Warmth & Affection, Academic Stimulation, and the use of

alternatives to physical punishment. They also raised their expectations for their children's future accomplishments. They were less uncertain about child development knowledge, but they were not more correct.

2) The several analyses indicate parents in the Home-Based program improved significantly more than parents of the other two programs on the Home Environment variables of Toys, Games and Reading Materials, Academic Stimulation, Modeling of Social Maturity, and Variety of Stimulation. There were more potential learning materials in the home at post test than at pretest and parents were more encouraging of independence and achievement.

3) The Home/School parents made greater gains than the Traditional program parents on the provision of Academic Stimulation.

4) Parents in the Home/School and Traditional programs reported higher levels of childrearing self-efficacy than did the parents in the Home-Based programs.

The data indicate that the Home-Based program parents made the strongest, most consistent and widest ranging gains over the time of intervention.

The results of these objective outcome analyses point to differences among the programs and their emphases. They are also consistent with the feelings expressed by the Teachers/Home Visitors themselves in response to a brief satisfaction questionnaire that was distributed to the participating staff at the end of the second year of the study. The results of the separate study are reproduced in Table 23.

Home visitors and teachers are more similar than different across the three programs. There are not significant differences in educational level, marital status, major area of study, years of volunteer work (ranging from 0 to 40), and plans to return to Head Start the following year (10% no, 65% yes, 25% maybe). The teachers in the Traditional program (wherein both respondents were called teachers, as opposed to home visitor respondents in the other two programs (χ^2 = 19.9998, $p<.0001$) were responsible for significantly more children than the home visitors in the Home/School and Home-Based programs (χ^2 = 36.25, $p<.0003$). The staff in the Home-Based program were slightly more likely to be Head Start parents – 3 of 8 compared to 1 of 2 in the Traditional program and not in the Home/School program (χ^2 = 5.15625, $p<.0759$).

The major accomplishments mentioned by the staff were also generally similar across programs. Most accomplishments mentioned concerned academic and social growth of the children. Social growth was a greater concern in the Home-Based and Home/School programs than it was in the Traditional program (χ^2 =- 8.57142, $p<.0138$). Parent change was not mentioned often, and was not mentioned at all by the teachers in the Traditional program.

Staff in all programs cited problems with lack of administrative support, as well as high job-related stress. The only other problem cited with great regularity was poor parent response (χ^2 - 5.8333, $p<.0541$). Both of the teachers in the Traditional program thought that this was their greatest problem, while 3 of 10 in the Home/School program felt similarly and only one of the eight respondents in the Home-Based program.

Staff were again similar in citing their goals for parents and children in their respective programs. There appeared to be somewhat more satisfaction with parent involvement in the children's education in the Home-Based and Home/School programs, although the difference between these and the Traditional program was only marginally significant (χ^2 - 8.73741, $p<.0681$). Satisfying this goal as a parental goal (one that the staff felt to be important to the parents in their program) was achieved most in the Home/School program and Home-Based program and least in the Traditional program (χ^2 - 12.27843, $p<.0154$). Access to community resources was felt to be attained partially in the Home/School and Traditional programs, while not at all in the Home-Based program (χ^2 - 8.63999, $p<.0154$). Finally, the staff saw social experience for the children as a major goal of the parents in the Traditional program but not in the other two programs (χ^2 - 12.2784, $p<.0154$).

Staff in the Home-Based program appear to be most satisfied with their levels of communication/interaction with parents and children, as well as with progress shown by children (in academic readiness) and parents in their program. Staff in the Traditional program ranked lowest on these same items. The Home-Based and Home/School program staff showed greater satisfaction with levels of information of community resources they could share with parents, time spent with parents on non-academic issues. The Traditional program staff rated their satisfaction with the amount of direct teaching of children, staff support, adequacy of materials and equipment, recognition received for their work, and opportunities for career advancement higher than the other two groups. Staff in all three programs were generally satisfied with the constructiveness of their supervision and generally dissatisfied with their level of pay.

The combined outcome study results, therefore, suggest that the Traditional program is likely to have its greatest influence, if any, on young children (3-year-olds) in the academic areas of Reading and Math. The Home-Based program is likely to have a greater impact on the family and home environment of the children. The Traditional program shows to some degree the efficacy of supplementing the environment of the child while the Home-Based program brings about greater changes in the enduring environment of the child. The Home/School program, generally speaking, brought about greater direct child changes than did the Home-Based program and greater parent and home environment changes than did the Traditional program, though it did not excel in either area.

The second purpose of this research was to determine the processes through which the effects of Head Start are achieved.

The process analyses serve to further amplify the picture. The analysis of the First Wave data provides the clearer picture. Within the First Wave, children in each of the programs made gains in all of the measured outcomes despite the between-group variability of In-Class instruction. Therefore, either these gains were unrelated to classroom instruction, or as hours of In-Class instruction decline, other factors - presumably parent-home teaching time and home visit time, coupled with an enriched home environment - compensate for their effect. The trade-off, however cannot be an equivalent one in terms of the overall hours of child instruction (In-Class Hours + Home Visit Hours + Parent Instruction Hours) as these total hours differed greatly between modes:

Traditional	Home/School	Home-Based
819 hours	619 hours	221 hours

It would appear, by this simple logic, that the type of instruction provided by the Home-Based program is far more effective in producing child gains.

This explanation, however assumes that the short-term child gains reported are, in fact, a result of instruction, which is questionable in view of the regression results. Rather, the dual regression analysis reveals a very complex interplay of type and amount of instruction, parent characteristics and child characteristics which varies predictably by type of intervention. In the Traditional program, where the intervention focuses primarily on the child in a school context, child gains appear to derive from that formal schooling. The amount of time parents report spending in instruction of their children declines from pretest to post test, possibly indicating an abrogation of responsibility for the role of "teacher." The learning opportunities provided by the Head Start program (Child In-Class Hours and Home-Visit Hours) demonstrate no positive effects on maternal behavior, and in fact, are associated with a decrease in the levels of Maternal Language and Encouragement to Learn. There is no effect of mothers' behaviors at post test once the effects of behavior at pretest have been removed. Hence, while the effects of the program on the children directly may be positive, the indirect effects which could logically ensue from intervention focused on the parents is negligible or negative.

Within the Home/School program, where child and parent are separate targets of intervention, the program-imposed learning opportunities affect child gains and, to a lesser degree, parental change. The Parents' Home Teaching Hours increase. This increase is reflected in an increase in the post test measuring of Maternal Encouragement to Learn which, in turn, has a greater effect on children's achievement at post test than at pretest levels. Hence, the benefits to the child may be two-fold.

The Home-Based program, which concentrates on improving the academically-related interaction of parent and child, demonstrates its effectiveness in a different manner. Although the formal Head Start intervention does not appear to influence child achievement directly, it does seem to significantly affect the way parents structure the child's environment and the availability of learning materials, as well as the level of Mother's Language and Encouragement to Learn. These factors, in turn, do affect the rate of achievement progress shown by the children.

Policy Considerations

The results of this study do suggest some conclusions that have relatively direct policy implications. However, such conclusions must be held as tentative, based as they are on a single study of a small sample of programs from one narrow geographical area. It is also based upon a limited set of measures gathered over a relatively short intervention span. The conclusions do need to be validated through additional study.

The results of this study do suggest the following:

1) While all three programs showed positive gains in both child and parent measures across time, it appears clear that it is easier to produce parent and home changes that are directly attributable to program intervention than it is to produce child changes that are directly attributable to intervention (i.e., Mode X Time interactions).

2) Child changes that are associated with program modality (Reading & Math for the Traditional program) are marginal in this study and are primarily the result of changes that occurred in a small number of 3-year-olds. No differences on standardized measures were found for 4-year-olds, and more children in the Traditional program received special placements in First Grade (again, this is a marginal finding based on a small n). These results are consistent with some previous research findings that indicate that within programs where the emphasis is on the child rather than changing the child's enduring context, initial gains are lost over time.

3) Parent and home changes that appear to be susceptible to intervention are also those parent and home variables that provide the greatest predictability (or have the greatest impact on) child post test scores.

In essence, the model of program effects pictured on Figure 1, seems to correctly portray the processes through which effects occur, but requires a time lag for the Home and Parental Variables to have an influence on child competence. In the Home-Based program, with its broader influence on the family and home environment, resulting child changes seem more likely to endure. The Home/School program appears to have a consistent, if moderate, effect, producing both direct changes in children and direct changes in parents and the home. For this program, Maternal Language at post test was a particularly good predictor of child reading and language outcomes for children, whereas these measures at pretest were not significant predictors of the child's post test scores. Such results suggest that enduring effects are achievable with this program.

If one looks particularly at Table 21 for the total sample analysis, the results indicate that there is a positive relationship between Home Visit Hours and Maternal Language and Variety of Stimulation, and a negative relationship between Child In-Class Time and parental Childrearing Style. These results support the notion of the predictability of key home and parent variables from program efforts expended in the home. It would appear that the amount of program time invested in bringing about enduring changes in the child's home environment is of greater, and perhaps more critical importance, than the amount of time invested on Child In-Class time.

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TABLE 1

Child Subjects by Wave, Age, and Gender

WAVE		AGE			
		3	4	5	TOTAL
1	Male	22	28	1	51
	Female	28	24	5	57
	Total	50	52	6	108
2 (Replication)	Male	22	15	0	37
	Female	17	10	2	29
	Total	39	25	2	66
Total Sample	Male	44	43	1	88
	Female	45	34	7	86
	Total	89	77	8	174
Returnees	Male	15	7	0	22
	Female	27	3	0	30
	Total	42	10	0	52

TABLE 2

Comparison of Head Start Delivery Modes

Characteristics	Traditional	Home/School	Home-Based
# Groups	2	4	4
# Children (Total Sample) actual	60	51	63
Children SES	- - - - - - - Head Start eligible - - - - - - - -		
# Staff	4	4	4
Staff qualifications	- - - - - Mimimum CDA or ECE degree - - - - -		
Child/staff ratio	1:9	1:9	1:9
Classroom days/month	20	8	2
Classroom hours/day	4.0	3.5	3.0
Total classroom direct contact hours/year	476	238	60
Home visits	3	34 (1/wk)	34
Hours/home visit	1.5	1.5	1.5
Total home visit hours	4.5	51	51
Program	- - - - Full health/nutrition, etc. - - - - -		

TABLE 3

Measures and Variables

Learning Opportunities

Records: Child In-Class Hours
- Home Visit Hours
- Parent Volunteer Time

Self Report: Parent Home Teaching Time

Child Measures

Individual Measures

PPVT - Mental Age

HSMB - Language
- Math
- Nature & Science
- Perception
- Reading
- Social Development

Behavior Survey
- Attention to Teacher
- Strongly Intent Individual Work
- Intent on Individual Work
- Attention to Other Children
- Social Work
- Disinterest
- Aimless Wandering
- Intent Non-Individual Work
- Disruptive

Teacher Rating
- General Preschool Adjustment
- Development

Kindergarten Records
- Kindergarten Placement
- First Grade Placement

Parent/Home Measures

Knowledge of Development
- Correct
- Incorrect
- Unsure

Parental Expectations
- High
- Moderate
- Low

HOME
- Toys, Games & Reading Material
- Language Stimulation
- Physical Environment
- Pride, Affection & Warmth
- Stimulation of Academic Behavior
- Modeling Social Maturity
- Variety & Stimulation
- Physical Punishment

Parent Interview Questionnaire
- Child Rearing Efficacy
- Empowerment

Derived
- Maternal Language
- Childrearing Warmth
- Encouragement

TABLE 4

Analysis of Learning Opportunities

Year 1

VARIABLE	MODE			F RATIO
	Traditional (N = 32)	Home/School (N = 31)	Home-Based (N = 37)	
In-Class Hours	476.89 (104.9)	173.63 (15.96)	32.78 (7.95)	363.84 ***
Home Visit Hours	2.58 (0.92)	37.24 (5.07)	35.25 (4.75)	598.76 ***
Home Teaching Time	10.21 (10.71)	11.83 (16.38)	6.57 (6.59)	4.251 *
Volunteer Time	65.25 (69.18)	91.62 (55.14)	50.21 (31.15)	5.26 **

* p>.01

** p>.001

*** p>.0001

Note: Numbers without parentheses are means. Numbers enclosed in parentheses are standard deviations.

TABLE 5

Analysis of Learning Opportunities

Year 2

VARIABLE	MODE			F RATIO
	Traditional (N = 26)	Home/School (N = 37)	Home-Based (N = 34)	
In-Class Hours	516.25 (28.63)	166.07 (22.84)	47.27 (6.09)	1383.0 *
Home Visit Hours	4.09 (0.16)	38.18 (7.881)	36.00 (3.98)	81.07 **
Home Teaching Time	10.886 (9.17)	16.21 (11.86)	11.75 (8.21)	2.80 (NS)
Volunteer Time	110.96 (117.8)	83.02 (65.29)	45.32 (54.13)	5.19 **

* p<.01

** p<.001

*** p<.0001

NOTE: Numbers without parentheses are means. Numbers enclosed in parentheses are standard deviations.

TABLE 6

Analysis of Learning Opportunities

Returnees

VARIABLE	MODE			F RATIO
	Traditional (N = 6)	Home/School (N = 14)	Home-Based (N = 14)	
In-Class Hours				
Year 1	520.0	167.78	32.26	933.30 *
Year 2	485.0	163.68	46.60	830.02 *
Home Visit Hours				
Year 1	2.25	37.41	35.49	202.37
Year 2	3.99	38.93	30.59	435.72 *
Home Teaching Hours				
Year 1	11.16	12.43	5.92	
Year 2	12.00	12.35	11.35	
Volunteer Time				
Year 1	71.00	93.97	45.33	3.24 *
Year 2	58.67	88.14	43.93	

* p<.05

** p<.01

*** p<.001

NOTE: Numbers without parentheses are means. Numbers enclosed in parentheses are standard deviations.

TABLE 7a

Child Variables: Pre- and Posttest Mean Scores by Mode with MANOVAS by Mode and Mode by Time

	Traditional		School/Home		Home		Pretest Multivariate F(18,128) = .96347	Posttest Multivariate F(18,128) = .80616	Pre- to Posttest Multivariate F(18,128) = 1.01116
	Pre	Post	Pre	Post	Pre	Post	Univariate F (x mode)	Univariate F (x mode)	Univariate F (mode x time)
Head Start Measures Battery									
Reading	45.000	47.1600	44.4074	46.3333	44.0000	48.3846	0.21385	0.66479	1.80545
	(3.6856)	(4.4878)	(6.1909)	(6.7254)	(6.0531)	(7.3216)	(.808)	(.518)	(.172)
Social	46.8800	51.2400	45.8148	49.0000	47.1154	50.6538	0.26167	0.62078	0.24199
	(5.1987)	(9.5406)	(4.9539)	(5.4065)	(9.5387)	(7.2660)	(.770)	(.540)	(.786)
Perception	44.3200	48.2800	39.9630	47.3333	40.5385	47.7692	2.78664	0.16826	2.23475
	(5.9492)	(5.2798)	(6.9917)	(6.7482)	(8.4296)	(6.9703)	(.068)	(.845)	(.114)
Science	49.4400	51.2000	47.3704	49.5556	49.3462	52.1154	1.83059	1.25318	0.33872
	(4.6465)	(6.3770)	(3.5750)	(4.8859)	(4.7070)	(6.04686)	(.168)	(.292)	(.714)
Math	45.3600	47.0400	45.4074	46.0370	46.2308	48.1923	0.39100	0.97523	0.45079
	(4.2415)	(4.7035)	(2.0241)	(6.2541)	(4.8769)	(5.2461)	(.678)	(.382)	(.639)
Language	42.7600	46.6000	41.6667	45.7778	42.6154	45.7692	0.29863	0.18178	0.26754
	(5.0849)	(4.6188)	(4.6822)	(4.6188)	(6.5120)	(6.5134)	(.743)	(.834)	(.766)
PPVT									
Mental Age	43.9200	49.4880	38.2222	46.0889	43.0154	48.0923	2.35864	0.71972	1.05957
	(9.2887)	(9.9576)	(6.9071)	(9.4327)	(13.2531)	(11.2053)	(.102)	(.490)	(.352)
Teacher Rater									
A	39.4400	77.3600	36.6296	71.4444	35.6538	71.4231	1.64524	2.61493	0.63638
	(10.1533)	(11.0033)	(5.5895)	(9.6649)	(8.1924)	(11.3848)	(.200)	(.080)	(.532)
B	26.5600	31.5600	24.4074	28.2963	24.0385	29.3077	1.04511	1.72199	0.41937
	(7.6107)	(6.8257)	(7.4279)	(5.9795)	(5.9362)	(6.6077)	(.357)	(.186)	(.659)

Note: Standard deviations are in parentheses. The multivariate F is an approximate F derived from the Wilks' Lambda.

TABLE 7

Child Variables: Mean Scores and MANOVA's by Mode, Cohort, and Time (Pretest to Posttest) for First Wave Data

	Traditional				Home/School				Home												
	3-yr-olds		4-yr-olds		3-yr-olds		4-yr-olds		3-yr-olds		4-yr-olds										
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Cohort at Pretest	Mode at Pretest	Mode X Cohort at Pretest	Cohort at Posttest	Mode at Posttest	Mode X Cohort at Posttest	Cohort X Time	Mode X Time	Mode X Cohort X Time
BSIB (N=85)	(N=16)		(N=14)		(N=21)		(N=7)		(N=15)		(N=15)		6.04721 (.000)***	.71339 (.737)	.40347 (.960)	5.06196 (.000)***	.48062 (.924)	.97302 (.478)	.58415 (.742)	.57040 (.863)	.68708 (.763)
Reading	44.062 (3.336)	46.125 (5.097)	46.545 (4.228)	49.182 (3.545)	43.429 (5.437	45.286 (6.835	46.000 (7.983)	48.714 (4.231)	40.867 (6.058)	44.867 (6.174)	45.667 (4.419)	50.133 (3.833)	7.80419 (.007)**	1.18362 (.312)	.45609 (.635)	9.95539 (.022)**	.09142 (.913)	.33608 (.716)	.30615 (.582)	1.36022 (.263)	.00780 (.930)
Perception	41.062 (5.639)	46.250 (4.553)	45.636 (8.322)	49.909 (5.205)	38.952 (6.438)	45.571 (7.560)	43.286 (7.521)	50.714 (3.729)	35.733 (7.166)	45.067 (5.688)	45.000 (5.669)	48.467 (4.998)	15.59170 (.000)***	1.46725 (.237)	1.19073 (.309)	9.40923 (.000)**	.49924 (.609)	.15563 (.856)	1.85636 (.177)	.85521 (.429)	1.96954 (.146)
Social	45.062 (5.446)	46.812 (5.282)	50.636 (7.047)	55.455 (9.637)	44.810 (5.240)	48.143 (5.721)	47.286 (2.690)	50.000 (3.742)	41.400 (6.833)	46.933 (4.061)	49.400 (9.070)	52.467 (6.501)	12.77029 (.001)**	1.03363 (.360)	1.11578 (.309)	14.63049 (.000)***	.73739 (.428)	1.81851 (.169)	.00002 (.997)	.28518 (.753)	1.27910 (.284)
Math	43.937 (4.281)	45.250 (4.626)	46.636 (2.580)	49.182 (2.442)	45.190 (2.040)	44.286 (7.288)	46.429 (2.070)	48.714 (3.302)	44.200 (4.296)	45.733 (2.052)	46.667 (2.380)	47.667 (5.447)	8.61276 (.004)**	.16611 (.847)	.35137 (.705)	8.84740 (.004)**	.13287 (.876)	.46411 (.630)	1.08113 (.302)	.30791 (.736)	.73400 (.483)
Language	42.000 (5.292)	46.312 (3.995)	43.636 (4.032)	47.545 (5.592)	41.333 (4.953)	44.286 (4.233)	43.429 (2.507)	47.000 (3.697)	39.467 (6.069)	42.667 (7.752)	43.867 (6.379)	48.867 (2.475)	4.98370 (.028)	.34144 (.712)	.55045 (.579)	8.88001 (.004)**	.52654 (.593)	1.87927 (.159)	.34822 (.557)	.22214 (.801)	.34818 (.707)
Science	47.562 (3.521)	48.812 (5.141)	52.182 (4.916)	54.273 (5.461)	46.143 (3.468)	47.429 (4.664)	49.857 (3.805)	52.571 (5.192)	45.867 (4.627)	48.133 (4.324)	51.867 (2.416)	55.067 (4.267)	29.92698 (.000)***	1.43548 (.244)	.58974 (.557)	28.15520 (.000)***	.82717 (.441)	.26730 (.766)	1.29732 (.258)	.50192 (.607)	.03429 (.966)
PPVT (N=72)	(N=19)		(N=11)		(N=21)		(N=7)		(N-18)		(N=16)										
Mental Age	40.295 (7.181)	47.242 (7.830)	47.345 (8.337)	53.018 (9.446)	37.429 (7.106)	43.943 (8.732)	40.800 (4.899)	51.086 (9.082)	35.000 (7.060)	39.333 (6.770)	45.000 (10.230)	52.800 (9.408)	15.28000 (.000)**	2.73000 (.071)+	1.19000 (.310)	21.64000 (.000)***	1.79000 (.173)	1.81000 (.169)	1.77000 (.187)	.88000 (.417)	1.23000 (.297)
Teacher Rater (N=95)	(N=21)		(N-11)		(N=21)		(N=7)		(N=19)		(N=16)		1.64329 (.199)	.85480 (.492)	1.15939 (.330)	4.73818 (.022)*	1.78178 (.135)	.63409 (.639)	1.47109 (.235)	.58633 (.673)	.68798 (.601)
Part A	35.429 (11.724)	70.714 (12.463)	43.091 (8.927)	80.709 (8.324)	35.476 (5.183)	67.714 (11.942)	36.457 (4.451)	74.571 (8.600)	35.579 (8.335)	66.895 (9.122)	35.757 (6.223)	71.812 (11.525)	2.93572 (.090)+	1.58829 (.210)	1.70404 (.188)	9.13723 (.003)**	2.85137 (.063)+	.46496 (.630)	2.86104 (.094)*	.55455 (.576)	.11871 (.888)
Part B	23.905 (7.266)	29.000 (6.812)	27.273 (8.403)	32.818 (5.326)	22.905 (6.730)	26.762 (6.804)	25.857 (6.094)	29.571 (4.721)	23.789 (5.544)	26.789 (6.545)	24.750 (5.814)	30.937 (3.890)	2.68877 (.105)	.35127 (.705)	.29330 (.747)	7.11736 (.004)**	1.46586 (.236)	.08177 (.922)	.82327 (.367)	.43057 (.651)	.69970 (.499)

NOTE: The multivariate F is an approximate F derived from Wilks' Lambda.

+ p<.10
* p<.05
** p<.01
*** p<.001

TABLE 8a

Child Variables: Mean Scores and MANOVA's by Mode, Time, and Mode by Time for Second Wave Data
(Not Including Returnees)

	Traditional		Home/School		Home		Pretest by Mode	Posttest by Mode	Pre- to Posttest	
	Pre	Post	Pre	Post	Pre	Post			(by Time)	(Mode by Time)
HSMB (N=38)	(N=17)		(N=13)		(N=8)		1.39333 (.194)	1.25227 (.271)	11.08498 (.000)**	.94475 (.510)
Reading	48.765 (2.166)	50.812 (2.883)	45.923 (2.892)	50.038 (2.156)	48.000 (2.268)	49.962 (2.794)	5.12090 (.011)*	.43680 (.650)	37.04525 (.000)***	2.75016 (.078)+
Social	49.882 (5.098)	54.900 (5.942)	46.846 (3.760)	52.038 (3.765)	48.375 (3.292)	53.812 (4.102)	1.80315 (.180)	1.24090 (.302)	41.22518 (.000)***	.02136 (.976)
Perception	43.412 (3.355)	48.276 (4.785)	44.385 (4.292)	48.738 (5.614)	45.250 (3.327)	48.700 (3.508)	.71827 (.495)	.63976 (.961)	21.23137 (.000)***	.18828 (.829)
Math	47.882 (2.315)	51.988 (2.400)	47.000 (2.415)	49.900 (3.199)	48.750 (3.576)	50.750 (3.927)	1.11335 (.340)	1.77883 (.184)	30.02029 (.000)***	1.28098 (.290)
Language	48.824 (4.127)	51.676 (2.661)	47.000 (2.082)	49.569 (2.673)	49.375 (3.543)	51.425 (1.926)	1.52211 (.232)	2.75887 (.077)	25.38188 (.000)***	.20823 (.813)
Science	51.176 (3.540)	54.294 (3.343)	49.538 (3.597)	52.708 (3.208)	51.250 (4.590)	54.600 (2.707)	.82216 (.448)	1.22606 (.306)	22.84578 (.000)	.00956 (.990)
PPVT (N=38) Mental Age	39.883 (8.470)	47.576 (11.985)	38.800 (4.909)	45.525 (8.365)	38.800 (7.033)	49.267 (10.120)	.22000 (.801)	.56000 (.575)	66.93 (.000)***	.98 (.383)
Teacher Rater (N=56)	(N=16)		(N=18)		(N=22)		2.13873 (.081)+	.90313 (.465)	9.85512 (.000)***	4.19437 (.008)**
Part A	59.000 (10.997)	65.375 (11.854)	60.500 (13.210)	64.722 (12.198)	58.955 (15.637)	67.500 (13.019)	.07610 (.927)	.27525 (.760)	17.15873 (.000)***	.71056 (.496)
Part B	19.875 (7.145)	25.375 (5.714)	24.333 (5.801)	23.722 (6.524)	22.364 (7.550)	23.909 (6.517)	1.76247 (.182)	.34998 (.706)	11.29851 (.000)***	7.21216 (.002)**

+ p<.10
* p<.05
** p<.01
*** p<.001

NOTE: The multivariate F is an approximate F derived from Wilks' Lambda.

TABLE 6b

Child Variables: Mean Scores and MANOVA's by Mode, Cohort, and Time (Pretest to Posttest) for Second Wave Data

	Traditional						Home/School						Home					
	3-yr-olds		4-yr-olds		Returnees		3-yr-olds		4-yr-olds		Returnees		3-yr-olds		4-yr-olds		Returnees	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
ISMB (N=84)	(N=9)		(N=8)		(N=15)		(N=11)		(N=2)		(N=17)		(N=2)		(N=6)		(N=16)	
Reading	48.222 (2.489)	50.211 (2.204)	49.375 (1.685)	51.487 (3.530)	49.867 (2.800)	52.300 (3.223)	43.455 (2.841)	50.068 (2.294)	48.500 (.707)	50.150 (1.768)	49.000 (3.536)	52.259 (2.536)	49.500 (.707)	46.400 (3.536)	47.500 (2.429)	51.150 (1.208)	49.429 (1.503)	50.350 (1.265)
Perception	42.444 (2.963)	46.456 (5.181)	44.500 (3.625)	50.325 (3.550)	47.933 (4.527)	51.147 (5.767)	44.000 (3.873)	48.636 (5.496)	46.500 (7.778)	50.400 (8.344)	48.294 (3.965)	50.361 (4.445)	46.000 (7.071)	44.900 (.566)	45.000 (2.380)	49.967 (3.076)	45.714 (2.730)	48.079 (2.962)
Social	47.667 (4.093)	52.589 (3.936)	52.375 (5.181)	57.500 (6.957)	52.467 (5.553)	57.573 (6.980)	46.273 (3.580)	52.273 (3.913)	50.000 (4.243)	50.750 (3.606)	52.529 (3.810)	55.818 (4.470)	50.900 (4.950)	48.950 (.071)	47.667 (2.803)	55.430 (3.309)	51.786 (4.117)	53.563 (3.633)
Math	47.222 (2.108)	51.589 (2.542)	48.625 (2.446)	52.437 (2.311)	50.600 (3.158)	52.633 (3.093)	46.818 (2.442)	49.691 (3.119)	48.000 (2.828)	51.050 (4.738)	50.412 (2.830)	52.935 (3.173)	50.500 (.707)	45.100 (2.687)	48.167 (4.083)	52.630 (1.767)	49.357 (1.906)	50.693 (2.427)
Language	47.111 (3.887)	50.900 (2.437)	50.750 (3.694)	52.662 (2.703)	50.200 (3.913)	52.480 (2.517)	46.909 (2.166)	49.373 (2.664)	47.500 (2.121)	50.650 (3.465)	50.882 (2.826)	52.188 (1.967)	51.500 (2.121)	49.550 (.636)	48.667 (3.777)	52.080 (1.800)	48.929 (2.129)	52.779 (8.074)
Science	50.000 (2.000)	54.211 (3.402)	52.500 (4.506)	54.387 (3.528)	54.200 (4.459)	56.700 (4.459)	49.636 (3.201)	52.665 (2.951)	49.000 (5.657)	53.050 (6.080)	52.706 (2.666)	55.482 (3.893)	52.500 (9.192)	50.650 (1.061)	50.833 (3.430)	55.917 (1.308)	51.643 (3.319)	54.493 (3.358)
PPVT (N=93)	(N=9)		(N=8)		(N=15)		(N=12)		(N=4)		(N=12)		(N=6)		(N=12)		(N=15)	
Mental Age	36.530 (5.758)	45.300 (10.716)	43.650 (9.769)	50.250 (13.477)	51.280 (8.258)	57.520 (10.680)	41.700 (6.575)	44.400 (7.380)	41.900 (5.095)	48.900 (11.400)	49.900 (8.162)	53.400 (8.416)	33.000 (3.457)	39.800 (3.826)	41.700 (6.595)	54.000 (8.848)	41.120 (6.039)	49.600 (7.420)
Teacher Rater (N=99)	(N=9)		(N=7)		(N=16)		(N=14)		(N=4)		(N=10)		(N=12)		(N=12)		(N=15)	
Part A	57.222 (7.607)	64.778 (10.779)	61.286 (14.530)	66.143 (13.969)	67.500 (14.700)	69.250 (12.678)	58.716 (12.332)	61.429 (10.196)	73.750 (5.377)	76.250 (12.842)	70.000 (12.410)	71.417 (9.317)	48.100 (11.902)	59.800 (8.108)	68.000 (12.432)	73.917 (13.676)	66.933 (13.899)	75.267 (6.563)
Part B	17.778 (6.553)	25.111 (5.278)	22.571 (7.435)	25.714 (6.651)	28.562 (8.438)	26.812 (7.332)	23.500 (5.155)	22.643 (6.570)	30.750 (2.217)	27.500 (5.447)	28.333 (5.051)	27.500 (3.849)	17.100 (5.384)	18.500 (3.894)	26.750 (6.240)	28.417 (4.461)	27.133 (6.653)	27.000 (4.259)

	Cohort at Pretest	Mode at Pretest	Mode by Cohort at Pretest	Cohort at Posttest	Mode at Posttest	Mode by Cohort at Posttest	Cohort by Time	Mode by Time	Mode by Cohort by Time
ISMB (N=84)	1.00651 (.428)	1.02155 (.433)	1.00336 (.424)	1.48153 (.138)	1.48223 (.138)	.63606 (.691)	1.30522 (.222)	2.37682 (.014)*	2.16744 (.002)**
Reading	2.34961 (.102)	1.55215 (.219)	1.11475 (.356)	6.07026 (.006)***	2.86443 (.064)+	.82331 (.516)	1.16727 (.317)	4.08508 (.021)*	3.79910 (.007)**
Perception	4.94346 (.010)*	.43806 (.649)	1.10095 (.362)	3.87113 (.025)*	2.67710 (.075)+	.76795 (.549)	1.28859 (.282)	1.00231 (.344)	.62786 (.644)
Social	4.01552 (.022)*	.59986 (.568)	.89976 (.469)	2.72465 (.072)+	.7480 (.477)	.42802 (.787)	.42428 (.656)	1.71811 (.166)	3.06616 (.021)*
Math	3.97298 (.023)+	.39050 (.678)	1.15567 (.337)	6.79463 (.002)**	3.66077 (.025)*	2.03313 (.098)+	5.91673 (.004)**	8.70463 (.000)***	6.81252 (.000)***
Language	1.36689 (.261)	.60090 (.551)	2.01236 (.101)	2.08552 (.131)	.46798 (.631)	.12186 (.974)	.44850 (.641)	.19846 (.820)	1.29149 (.281)
Science	2.61487 (.080)+	1.12226 (.331)	.80747 (.524)	3.65306 (.031)*	1.00087 (.362)	.89006 (.474)	.76458 (.469)	.37740 (.687)	1.71922 (.155)
PPVT (N=93)									
Mental Age	23.37000 (.000)***	4.66000 (.012)*	1.53000 (.200)	9.88000 (.000)***	.88000 (.418)	1.42000 (.242)	1.11000 (.336)	1.98000 (.211)	.88000 (.482)
Teacher Rater (N=99)	8.63735 (.000)***	1.91980 (.100)	1.72512 (.095)+	4.80726 (.001)**	2.02369 (.090)+	1.31332 (.230)	2.77940 (.008)*	4.10629 (.000)**	1.95967 (.024)+
Part A	12.80467 (.000)***	1.53742 (.221)	1.00418 (.410)	9.10486 (.000)***	.72130 (.489)	1.25980 (.292)	1.32277 (.272)	2.00000 (.137)	.20301 (.937)
Part B	10.62552 (.000)***	3.02463 (.002)**	1.25627 (.293)	8.86050 (.000)***	.53691 (.586)	1.04780 (.127)	5.64477 (.005)**	4.61421 (.012)*	2.71829 (.036)*

Table 9

Child Variables: Mean Scores and MANOVA's by Mode and Mode by Time for Returnees: October 1985 - April 1987

	Traditional				Home/School				Home				October 1985 F(p <)	April 1986 F(p <)	October 1986 F(p <)	April 1987 F(p <)	October 1985 to April 1987	April 1986 to October 1986
	Oct. 1985	April 1986	Oct. 1986	April 1987	Oct. 1985	April 1986	Oct. 1986	April 1987	Oct. 1985	April 1986	Oct. 1986	April 1987						
[illegible]																		
Reading (N = 37)	43.778 (3.114)	45.222 (4.177)	49.111 (2.333)	51.900 (1.783)	42.875 (5.290)	45.125 (6.229)	48.937 (3.642)	52.375 (2.372)	42.750 (4.957)	44.417 (5.823)	49.167 (1.193)	53.525 (1.286)	.14 (.870)	.07 (.932)	.000 (.972)	2.83 (.073)+	.61976 (.544)	.12475 (.383)
Language (N = 39)	41.889 (5.295)	45.222 (3.073)	50.444 (4.065)	52.700 (2.079)	40.197 (4.929)	43.875 (4.440)	50.812 (2.903)	52.196 (2.032)	41.429 (5.680)	44.855 (6.620)	49.216 (2.517)	52.436 (8.064)	.36 (.702)	.24 (.796)	1.06 (.357)	.06 (.938)	.04777 (.915)	1.21437 (.309)
Perception (N=38)	41.333 (5.244)	44.111 (4.197)	48.111 (3.333)	51.000 (4.379)	38.125 (5.965)	45.500 (7.137)	48.625 (3.845)	50.256 (4.376)	37.231 (7.167)	44.077 (6.714)	45.846 (2.703)	48.300 (2.442)	1.22 (.309)	.22 (.801)	2.59 (.089)	1.48 (.242)	1.27092 (.291)	.05973 (.942)
Math (N = 28)	43.222 (5.069)	45.667 (.866)	50.000 (1.414)	52.400 (1.992)	44.937 (2.048)	43.062 (7.987)	50.437 (2.920)	53.062 (3.232)	43.615 (4.312)	45.395 (2.103)	49.231 (1.922)	50.400 (2.254)	.75 (.478)	.96 (.295)	.98 (.386)	3.70 (.035)*	.75624 (.492)	2.16196 (.130)
Science (N = 34)	47.333 (4.243)	48.889 (4.045)	53.444 (2.128)	55.778 (2.460)	45.375 (3.344)	46.250 (4.297)	52.687 (2.750)	55.644 (3.962)	46.231 (3.586)	48.346 (3.579)	51.692 (3.497)	54.515 (3.557)	.84 (.442)	1.97 (.154)	1.01 (.376)	.48 (.623)	.99536 (.390)	3.43522 (.043)*
Social (N = 36)	46.667 (2.915)	48.333 (2.398)	52.333 (3.775)	58.778 (4.936)	44.187 (5.639)	47.875 (6.371)	52.687 (3.877)	53.650 (4.361)	42.545 (5.681)	47.091 (4.300)	51.818 (3.683)	53.964 (3.918)	1.60 (.217)	.15 (.861)	.17 (.843)	2.92 (.068)	.05583 (.946)	.12114 (.886)
PPVT (N = 35)																		
Mental Age	37.467 (5.393)	45.333 (7.632)	51.333 (6.083)	58.133 (7.203)	36.400 (6.018)	43.400 (6.975)	49.900 (8.162)	53.400 (8.416)	34.371 (5.834)	38.400 (5.047)	41.057 (6.283)	49.629 (7.700)	.86 (.432)	3.66 (.037)*	7.90 (.002)	3.24 (.052)	1.65741 (.207)	1.07422 (.354)
Teacher Rater (N = 36)													.01625 (.999)	.57579 (.681)	.40818 (.602)	.35742 (.432)		
Part A	36.133 (11.347)	73.889 (6.714)	69.222 (9.641)	72.222 (6.833)	36.417 (6.431)	70.583 (12.176)	70.000 (12.410)	71.417 (9.317)	36.133 (8.459)	67.667 (8.991)	66.933 (13.869)	75.267 (6.563)	.00390 (.996)	1.18563 (.318)	.22025 (.803)	.34671 (.398)	.31493 (.560)	.59725 (.556)
Part B	23.556 (6.394)	29.556 (5.548)	29.333 (5.612)	27.556 (4.773)	23.750 (5.402)	27.917 (6.908)	28.333 (5.051)	27.500 (3.349)	23.200 (5.306)	26.200 (6.368)	27.133 (6.633)	27.000 (4.259)	.0300 (.970)	.74939 (.481)	.50591 (.620)	.29654 (.336)	.03702 (.993)	.09639 (.304)

NOTE: Standard deviations are in parentheses. The univariate F is derived from Wilks Lambda.

+ p < .10
*p < .05
**p < .01
***p < .001

TABLE 10

Behavior Survey: Mean Scores and MANOVA's by Mode and Mode by Time for First Wave Data

	Traditional		Home/School		Home		Mode at Pretest F(18,186)=1,85806 p<,022*	Mode at Posttest F(18,186)=2.90195 p<,000***	Mode by Time Pretest - Posttest F(18,186)=1.43482 p<.119
	Pre	Post	Pre	Post	Pre	Post			
1. Attention to Teacher	29,059 (16,351)	39,120 (31,169)	31,819 (14,822)	30,808 (17,114)	26,442 (13,514)	22,248 (12,399)	1,09764 (,338)	5,24908 (,007)**	2,84746 (,063)+
2. Strongly Intent on Individual Work	8,433 (12,500)	12,500 (10,446)	5,475 (6,677)	10,354 (10,831)	14,293 (12,638)	19,267 (14,479)	5,65113 (,005)**	5,11741 (,008)**	,03965 (,961)
3. Intent on Individual Work	27,441 (18,907)	25,463 (17,474)	32,863 (18,036)	25,842 (16,717)	30,181 (23,291)	22,065 (14,534)	,62461 (,538)	,56505 (,570)	,62877 (,535)
4. Disinterest	2,614 (4,914)	7,176 (17,154)	1,560 (3,372)	2,525 (4,412)	,810 (2,811)	,238 (1,409)	2,00015 (,141)	4,08214 (,020)*	1,98609 (,143)
5. Attentive to Other Children	26,995 (16,281)	23,380 (26,036)	26,080 (15,765)	24,411 (15,863)	30,703 (18,694)	34,930 (15,780)	,71718 (,491)	3,57929 (,031)*	,87301 (,421)
6. Social Work	2,688 (6,506)	3,935 (7,839)	,303 (1,741)	4,545 (7,538)	,381 (1,570)	,000 (,000)	3,93614 (,023)*	5,36076 (,006)**	2,89728 (,060)+
7. Intent on Non-Teacher Prescribed Activity	1,014 (2,916)	0,000 (,000)	,303 (1,741)	,253 (1,451)	,190 (1,127)	0,000 (,000)	1,63119 (,201)	1,07737 (,344)	1,88561 (,157)
8. Aimless Wandering	,563 (1,936)	,698 (2,336)	0,000 (,000)	,505 (2,019)	,476 (1,963)	,833 (3,822)	,95727 (,387)	,15691 (,855)	,07191 (,931)
9. Disruptive	0,000 (,000)	,231 (1,389)	0,000 (,000)	1,010 (2,762)	,952 (4,007)	,238 (1,409)	1,96705 (,148)	1,80637 (,170)	2,72569 (,070)+

+ p<.10
* p<.05
** p<.01
*** p<.001

NOTE: The multivariate F is an approximate F derived from Wilks' Lambda.

TABLE 11

Behavior Survey: Mean Scores and MANOVA's by Mode and Mode by Time for Second Wave Data
(Returnees not Included)

	Traditional		Home/School		Home		Mode at Pretest F(18,186)=1.85806 p<.022*	Mode at Posttest F(18,186)=2.90195 p<.000***	Mode by Time Pretest - Posttest F(18,186)=1.43482 p<.119
	Pre	Post	Pre	Post	Pre	Post			
(N=55)									
1. Attention to Teacher	46.569 (20.211)	40.686 (15.550)	33.333 (14.130)	33.333 (11.411)	30.159 (19.090)	33.730 (15.473)	4.17646 (.021)*	1.44999 (.244)	.81792 (.447)
2. Strongly Intent on Individual Work	13.725 (11.763)	9.804 (7.925)	12.255 (10.256)	7.353 (7.729)	15.079 (15.728)	12.302 (11.672)	.22061 (.803)	1.28187 (.286)	.09487 (.910)
3. Intent on Individual Work	8.824 (11.208)	9.804 (7.357)	11.765 (7.828)	18.137 (11.500)	12.302 (9.360)	13.492 (9.674)	.68988 (.506)	3.17787 (.050)*	.85475 (.431)
4. Disinterest	2.451 (3.914)	3.431 (4.227)	1.471 (3.275)	5.392 (7.181)	0.000 (.000)	2.381 (4.672)	3.62424 (.034)*	1.44848 (.244)	.97410 (.384)
5. Attentive to Other Children	19.608 (12.823)	25.985 (10.575)	18.137 (9.867)	24.510 (10.404)	29.365 (17.603)	26.984 (12.049)	3.62307 (.034)*	.23327 (.793)	1.60248 (.211)
6. Social Work	8.333 (8.333)	4.412 (7.860)	13.725 (11.001)	4.412 (7.287)	5.952 (12.677)	5.159 (6.706)	2.41562 (.099)+	.06879 (.934)	1.86771 (.165)
7. Intent on Non-Teacher Prescribed Activity	.495 (2.021)	.980 (2.768)	.980 (2.768)	.490 (2.021)	1.984 (4.491)	0.000 (.000)	.97998 (.382)	1.25375 (.294)	1.89816 (.160)
8. Aimless Wandering	0.000 (.000)	1.961 (3.644)	1.961 (3.644)	1.471 (3.275)	1.984 (3.637)	2.381 (4.672)	2.49435 (.092)+	.24679 (.782)	1.51898 (.228)
9. Disruptive	9.963 (10.306)	1.961 (4.686)	0.000 (.000)	3.922 (8.896)	2.121 (6.459)	2.381 (6.531)	8.46364 (.001)**	.38676 (.681)	2.36735 (.104)

+ p<.10
* p<.05
** p<.01
*** p<.001

NOTE: The multivariate F is an approximate F derived from Wilks' Lambda.

TABLE 12

Behavior Survey: Mean Scores and MANOVA's by Mode and Mode by Time for Returnees

	Traditional				Home/School				Home				Mode at Oct/85	Mode at Apr/86	Mode at Oct/86	Mode at Apr/87	Mode x Time 10/85-4/86	Mode x Time 10/86-4/87	Mode x Time 10/85-4/87
	Oct/85	Apr/86	Oct/86	Apr/87	Oct/85	Apr/86	Oct/86	Apr/87	Oct/85	Apr/86	Oct/86	Apr/87							
													F(18,70)= 2.45511 p<.006**		F(18,70)= 2.05552 p<.017*	F(18,70)= 1.84666 p<.036*			
1. Attention to Teacher	31.174 (17.331)	31.250 (14.434)	40.625 (17.710)	42.187 (13.767)	28.977 (10.691)	26.562 (17.800)	33.333 (14.907)	41.667 (16.942)	29.048 (13.848)	35.671 (14.0[illegible])	28.571 (14.060)	39.286 (15.821)	.12069 (.887)	.52280 (.597)	2.25119 (.118)	.14492 (.866)	.16 (.855)	1.00 (.376)	.00 (.999)
2. Strongly Intent on Individual Work	5.720 (8.767)	14.062 (8.985)	17.708 (12.500)	11.458 (9.562)	5.308 (5.801)	14.062 (13.165)	15.104 (10.192)	10.937 (10.852)	15.714 (14.198)	19.405 (15.270)	17.857 (11.255)	14.286 (11.050)	5.09925 (.010)*	.87344 (.425)	.28066 (.750)	.43237 (.652)	.53 (.594)	.31 (.738)	1.44 (.248)
3. Intent on Individual Work	30.303 (21.381)	21.875 (13.566)	4.687 (4.270)	11.979 (8.590)	37.197 (16.189)	24.132 (16.093)	8.333 (8.051)	13.021 (11.373)	31.508 (32.759)	19.405 (13.800)	11.905 (12.103)	19.048 (43.169)	.37297 (.691)	.39339 (.677)	2.65974 (.081)+	.33599 (.716)	.28 (.759)	.05 (.947)	.35 (.706)
4. Disinterest	3.068 (5.956)	4.687 (6.062)	3.125 (7.376)	4.167 (6.086)	.391 (1.562)	1.562 (3.359)	3.125 (5.990)	.521 (2.083)	1.548 (4.054)	.595 (2.227)	3.571 (6.299)	.595 (2.227)	1.58505 (.217)	3.84693 (.029)*	.02232 (.978)	4.27124 (.020)*	.79 (.461)	.900 (.414)	.35 (.706)
5. Attentive to Other Children	21.155 (13.277)	22.917 (17.873)	25.000 (15.516)	24.479 (10.745)	25.940 (14.714)	29.514 (16.161)	20.312 (12.160)	26.562 (10.192)	31.944 (22.074)	33.452 (13.406)	32.143 (19.844)	41.667 (60.975)	1.52960 (.228)	1.67065 (.200)	2.06645 (.139)	1.07185 (.351)	.2400 (.789)	1.73 (.189)	.12 (.890)
6. Social Work	5.568 (8.894)	2.083 (5.693)	7.812 (9.845)	2.083 (4.811)	0.000 (.000)	4.687 (8.590)	16.667 (11.386)	3.125 (10.486)	.476 (1.782)	0.000 (.000)	4.762 (5.385)	1.786 (3.548)	5.25158 (.009)**	2.23889 (.119)	6.67274 (.003)**	.15133 (.860)	3.91 (.026)*	2.72 (.077)+	2.24 (.119)
7. Intent on Non-Teacher Prescribed Activity	1.193 (3.265)	0.000 (.000)	0.000 (.000)	0.000 (.000)	0.000 (.000)	0.000 (.000)	.521 (2.083)	0.000 (.000)	0.000 (.000)	0.000 (.000)	0.000 (.000)	5.952 (22.272)	1.99793 (.148)		.93478 (.401)	1.15760 (.326)	3.22 (.048)*	1.20 (.310)	1.35 (.268)
8. Aimless Wandering	0.000 (.000)	1.562 (3.359)	1.562 (3.359)	.521 (2.083)	0.000 (.000)	.521 (2.083)	1.042 (2.846)	1.042 (2.846)	1.190 (3.026)	.595 (2.227)	1.190 (3.026)	.595 (2.227)	2.49275 (.095)+	.76412 (.472)	.12021 (.887)	.21465 (.808)	.82 (.445)	.09 (.913)	1.12 (.334)
9. Disruptive	0.000 (.000)	.521 (2.083)	1.042 (4.167)	1.562 (3.359)	0.000 (.000)	.521 (2.083)	1.562 (4.533)	2.083 (4.811)	2.381 (6.192)	0.000 (.000)	0.000 (.000)	7.143 (22.374)	2.38161 (.104)	.43623 (.649)	.70644 (.499)	.85029 (.434)	3.18 (.049)*	1.22 (.305)	.22 (.801)

NOTE: Multivariate tests at April 1986, were not computable due to the lack of variance in Variable 7: Intent on Non-Teacher Prescribed Activity. MANOVA's across time were run individually for each variable due to insufficient degrees of freedom required for a multivariate analysis.

TABLE 13

Kindergarten Placement by Mode

	Traditional	Home/School	Home	Totals
Special Placement	3 (12%)	1 (4%)	0 (0%)	4 (16%)
Normal Placement	8 (32%)	6 (24%)	7 (28%)	21 (84%)
Totals	11 (44%)	7 (28%)	7 (28%)	25 (100%)

$\chi^2 = 2.38$ df = 2 $p<.30$(ns)

TABLE 14

First Grade Placement by Mode

	Traditional	Home/School	Home	Totals
Special Placement	4 (16.7%)	0 (0%)	0 (0%)	4 (16.7%)
Normal Placement	7 (29.2%)	6 (25%)	7 (29.2%)	20 (83.3%)
Totals	11 (45.8%)	6 (25.0%)	7 (29.2%)	24 (100%)

$\chi^2 = 5.67$ df = 2 $p<.06$

TABLE 15a

Parent Variables: Mean Scores and MANOVA's by Mode and Mode by Time for First Wave Data

	Traditional		Home/School		Home		Pretest F (p <)	Posttest F (p <)	Pre- to Posttest F (p <)
	Pre	Post	Pre	Post	Pre	Post			
HOME (N = 107)	(N = 36)		(N = 34)		(N = 37)		3.98202 (.000)***	4.69354 (.000)***	3.385 (.000)***
Toys, Games, Reading Materials	7.750 (2.489)	8.389 (2.115)	7.647 (2.673)	8.647 (2.347)	6.000 (2.687)	8.730 (1.774)	5.54972 (.008)**	.26356 (.769)	11.73583 (.000)***
Language Stimulation	6.518 (.941)	6.667 (.862)	6.059 (1.391)	6.500 (.788)	6.000 (.882)	6.784 (.479)	2.54972 (.083)	1.36774 (.260)	3.11389 (.049)*
Modeling & Encouragement of Social Maturity	3.139 (1.125)	2.639 (1.099)	2.882 (1.250)	3.412 (1.048)	3.730 (1.018)	4.216 (.821)	5.28882 (.006)**	22.96916 (.000)***	8.96446 (.000)***
Pride, Warmth, and Affection	5.139 (1.533)	5.583 (1.500)	5.029 (1.696)	5.735 (1.286)	5.784 1.315	6.649 (.735)	2.60601 (.079)+	8.18202 (.001)**	.69810 (.500)
Academic Stimulation	4.361 (1.018)	4.583 (.554)	3.471 (1.376)	4.324 (.535)	3.135 (1.378)	4.568 (.603)	9.05723 (.000)***	2.30686 (.105)	9.05416 (.000)***
Variety of Stimulation	6.500 (1.648)	6.667 (1.249)	6.353 (1.475)	6.441 (1.521)	6.432 (1.324)	7.324 (1.270)	.08563 (.918)	4.23036 (.017)*	3.82291 (.025)*
Physical Environment	6.000 (1.586)	6.167 (1.781)	5.647 (2.028)	5.941 (1.705)	5.730 (1.758)	6.297 (1.288)	.37474 (.688)	.44569 (.624)	.56704 (.569)
Physical Punishment	3.444 (1.054)	3.306 (1.305)	2.824 (1.359)	3.029 (1.193)	3.243 (1.140)	3.894 (.393)	2.47704 (.089)+	6.44233 (.002)**	2.44346 (.092)+
Knowledge of Development Scale (N = 113)	(N = 39)		(N = 34)		(N = 40)		.79496 (.575)	1.7163 (.118)	2.19286 (.045)*
Correct Knowledge	23.641 (5.774)	23.846 (8.100)	25.588 (5.118)	24.912 (5.005)	25.675 (6.048)	25.675 (8.577)	1.57205 (.212)	.59110 (.555)	.15451 (.857)
Incorrect Knowledge	6.154 (2.843)	6.282 (2.964)	5.794 (2.993)	7.471 (2.495)	5.650 (3.009)	5.295 (3.422)	.30345 (.739)	2.63419 (.076)+	3.00239 (.054)*
Uncertainty	7.103 (5.633)	4.026 (3.344)	5.265 (4.173)	4.588 (4.626)	5.475 (4.961)	2.600 (2.470)	1.54026 (.219)	3.1424 (.047)*	3.40225 (.037)*
Parental Expectation Scale (N = 90)	(N = 31)		(N = 27)		(N = 32)		1.82087 (.117)	2.34794 (.033)*	.69799 (.652)
Low	.935 (.854)	.806 (.749)	.593 (.694)	.519 (.700)	.469 (.718	.562 (1.076)	3.14580 (.098)*	.96069 (.387)	.63355 (.533)
Moderate	9.677 (.871)	9.903 (.301)	9.667 (.480)	9.704 (.542)	9.687 (.693)	9.875 (.421)	.00634 (.994)	1.81448 (.169)	.59561 (.553)
High	6.355 (1.959)	7.581 (1.996)	5.296 (1.636)	6.333 (1.981)	5.687 (2.086)	6.219 (2.338)	2.28641 (.108)	3.89797 (.024)*	.91250 (.405)

Note: Standard deviations are in parenthesis. The univariate F is derived from Wilks Lambda.

+ < .10　　**p < .01
*p < .05　　***p < .001

TABLE 15b

Parent Variables: Mean Scores and MANOVA's - First Wave Data

	Traditional				Home/School				Home				Within Time 1 x Cohort	Within Time 1 x Mode		Within Time 2 x Cohort	Within Time 2 x Mode		Mode x Time	Time
	3-yr-olds		4-yr-olds		3-yr-olds		4-yr-olds		3-yr-olds		4-yr-olds									
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post								
HOME (N=95)													1.53085 (.163)	3.38585 (.000)***		1.34407 (.234)	164.000 (.000)***		3.34294 (.000)***	8.35360 (.000)***
Toys, Games, Reading Materials	7.619 (2.598)	8.286 (2.028)	8.000 (2.646)	8.364 (2.42)	7.619 (2.397)	8.952 (2.355)	8.857 (1.952)	8.286 (1.890)	5.368 (2.813)	8.421 (1.710)	6.375 (2.419)	8.875 (1.857)	2.41122 (.124)	7.31024 (.001)**		.00964 (.922)	.23012 (.803)		13.67964 (.000)***	30.15092 (.000)***
Language Stimulation	6.524 (.981)	6.667 (.730)	6.636 (.924)	6.909 (.362)	6.095 (1.179)	6.524 (.928)	6.714 (.488)	6.571 (.535)	5.895 (.937)	6.842 (.375)	6.000 (.816)	6.687 (.602)	1.69471 (.196)	3.63816 (.030)*		.09550 (.758)	.95571 (.388)		3.99435 (.022)*	11.74234 (.001)**
Physical Environment	6.190 (1.692)	6.333 (1.826)	5.909 (1.064)	5.636 (1.963)	6.095 (1.609)	6.094 (1.480)	5.286 (1.799)	6.429 (.787)	5.158 (1.922)	6.053 (1.353)	6.250 (1.438)	6.500 (1.265)	.0000 (.999)	.44041 (.645)		.00670 (.985)	.33087 (.719)		1.47769 (.234)	4.01449 (.048)*
Modeling & Encouragement of Social Maturity	3.286 (1.056)	2.619 (1.203)	3.000 (1.414)	2.818 (.982)	2.952 (1.203)	3.524 (1.123)	3.571 (1.134)	3.286 (1.113)	3.579 (1.170)	3.947 (.848)	3.812 (.834)	4.500 (.730)	.56478 (.454)	2.08724 (.130)		.57346 (.451)	17.38053 (.000)***		5.37178 (.006)***	.41045 (.523)
Pride, Warmth, and Affection	5.095 (1.375)	5.571 (1.599)	5.636 (1.362)	5.636 (1.362)	5.190 (1.806)	5.571 (1.399)	5.143 (1.574)	6.143 (.690)	5.684 (1.336)	6.684 (.478)	5.812 (1.377)	6.625 (1.025)	.39330 (.532)	1.11518 (.332)		.50744 (.478)	6.43816 (.002)**		1.45750 (.238)	12.34287 (.001)**
Academic Stimulation	4.238 (1.091)	4.524 (.512)	4.636 (.674)	4.818 (.405)	3.286 (1.419)	4.143 (.478)	4.286 (.488)	4.714 (.488)	2.789 (1.357)	4.421 (.507)	3.375 (1.360)	4.687 (.704)	6.02105 (.016)**	9.87863 (.000)***		10.29910 (.002)**	1.28255 (.282)		8.27623 (.001)**	32.49561 (.000)***
Variety of Stimulation	6.476 (1.662)	6.667 (1.017)	6.455 (1.695)	6.636 (1.286)	6.238 (1.480)	6.333 (1.713)	7.143 (.690)	6.429 (.976)	6.000 (1.491)	7.211 (1.273)	6.750 (.931)	7.437 (1.365)	2.91045 (.091)	.31941 (.727)		.10760 (.744)	3.80106 (.026)*		6.50336 (.002)**	3.57808 (.062)
Physical Punishment	3.429 (1.307)	3.286 (1.419)	3.364 (.924)	3.091 (1.300)	2.857 (1.389)	2.857 (1.195)	2.143 (1.574)	3.286 (1.496)	3.421 (1.071)	3.895 (.459)	2.937 (1.237)	3.875 (.342)	2.37248 (.127)	3.39986 (.038)*		.08765 (.768)	4.90971 (.009)***		2.84308 (.064)+	4.06765 (.047)*
KIS (N = 98)													.91970 (.482)	.18000 (.864)		.52756 (.787)	2.03601 (.063)+		1.82586 (.096)+	7.18029 (.000)***
Correct Knowledge	24.714 (5.236)	26.143 (3.759)	22.769 (6.057)	21.231 (10.639)	25.333 (4.487)	25.095 (5.069)	23.857 (7.151)	22.571 (5.192)	26.632 (5.620)	28.368 (4.798)	23.706 (6.498)	25.235 (2.397)	.12473 (.883)	.54215 (.583)		.27180 (.763)	2.49478 (.088)+		1.32132 (.272)	.18502 (.668)
Incorrect Knowledge	6.905 (2.968)	6.762 (1.814)	5.077 (2.397)	5.615 (3.548)	5.667 (2.415)	7.333 (2.633)	7.000 (4.830)	8.000 (1.915)	5.579 (2.714)	6.316 (3.384)	6.118 (3.407)	6.176 (3.302)	2.15985 (.121)	.17685 (.838)		.66062 (.519)	2.04378 (.135)		1.01129 (.368)	3.98804 (.049)*
Uncertainty	5.238 (4.194)	4.095 (3.506)	9.077 (6.639)	4.462 (3.406)	5.524 (3.642)	4.571 (4.654)	5.857 (6.492)	6.429 (5.798)	4.579 (3.746)	2.263 (2.446)	6.941 (6.300)	3.412 (2.740)	.78570 (.459)	.83775 (.436)		.26747 (.766)	3.62132 (.031)*		3.40412 (.037)*	19.42948 (.000)***
PES (N = 80)													.46309 (.709)	.95676 (.457)		.37037 (.775)	1.25380 (.283)		.51923 (.793)	6.62467 (.001)**
Low Expectations	1.053 (.911)	.842 (.832)	.667 (.707)	.667 (.500)	.588 (.618)	.647 (.786)	.600 (.894)	.400 (.548)	.412 (.795)	.647 (1.367)	.538 (.660)	.538 (.660)	.18616 (.667)	1.70661 (.189)		.61568 (.435)	.36118 (.698)		.53763 (.586)	.03457 (.853)
Moderate Expectations	9.684 (1.003)	9.895 (.315)	9.556 (.726)	9.889 (.333)	9.765 (.437)	9.647 (.606)	9.600 (.548)	10.000 (.000)	9.647 (.862)	9.882 (.485)	9.692 (.480)	9.846 (.376)	.19786 (.658)	.04310 (.958)		.91391 (.342)	.11655 (.890)		.16553 (.848)	5.03620 (.028)*
High Expectations	6.316 (2.162)	7.421 (1.835)	6.000 (1.523)	7.778 (2.224)	5.235 (1.480)	5.941 (1.638)	5.300 (1.643)	6.600 (2.074)	6.176 (2.243)	6.647 (1.902)	5.000 (1.915)	5.923 (2.722)	1.15215 (.287)	1.25195 (.292)		.03669 (.849)	3.31832 (.042)*		.82286 (.443)	16.30317 (.000)***

Table 16

Parent Variables: Mean Scores and MANOVA's - Second Wave Data

	TRADITIONAL						HOME/SCHOOL						HOME														
	3-yr-olds		4-yr-olds		Returnees		3-yr-olds		4-yr-olds		Returnees		3-yr-olds		4-yr-olds		Returnees										
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Mode at Pretest	Mode X Cohort at Pretest	Cohort at Pretest	Cohort at Posttest	Mode at Posttest	Mode X Cohort at Posttest	Cohort X Time	Mode X Time	Mode X Cohort X Time
HOME (N = 92)	(N = 7)		(N = 6)		(N = 15)		(N = 13)		(N = 4)		(N = 11)		(N = 9)		(N = 12)		(N = 15)		1.54127	3.52803	1.76015	1.14494	5.10949	1.22599	.96026	2.39555	1.39933
																			(.036)*	(.000)***	(.042)*	(.319)	(.000)***	(.194)	(.503)	(.003)**	(.081)†
Toys, Games, Reading Materials	8.000	8.000	7.667	8.500	8.667	8.600	7.308	7.769	9.000	9.000	8.455	9.545	5.556	8.333	8.083	9.583	7.733	9.067	.71420	1.81419	2.65707	2.56725	.73806	.40631	.20012	5.44794	1.16462
	(1.633)	(1.633)	(1.751)	(1.225)	(1.877)	(1.805)	(3.521)	(2.920)	(.816)	(1.155)	(2.307)	(1.968)	(3.283)	(2.291)	(2.906)	(1.621)	(1.792)	(1.438)	(.585)	(.169)	(.076)†	(.083)†	(.481)	(.804)	(.819)	(.006)**	(.332)
Language Stimulation	6.286	6.714	6.667	7.000	6.600	6.733	6.308	6.538	7.000	7.000	6.818	6.818	5.333	6.111	6.917	6.833	6.800	6.867	1.71960	1.22854	8.63645	3.64394	.90842	.86358	2.34261	.47762	.60404
	(.756	(.488)	(.516)	(.000)	(.632)	(.594)	(1.548)	(1.127)	(.000)	(.000)	(.405)	(.405)	(1.225)	(.928)	(.289)	(.577)	(.561)	(.352)	(.153)	(.298)	(.000)***	(.030)*	(.407)	(.489)	(.102)	(.622)	(.660)
Physical Environment	6.000	6.000	7.000	7.000	6.533	6.533	5.308	6.231	6.250	5.500	5.864	5.909	6.444	6.444	6.667	6.667	6.600	6.067	.19604	2.20094	.96343	.11869	1.01965	.58552	1.29914	.85612	1.56309
	(2.646)	(2.646)	(.000)	(.000)	(1.807)	(1.807)	(2.359)	(2.048)	(1.500)	(1.291)	(1.807)	(1.814)	(1.130)	(.882)	(.888)	(.888)	(.737)	(1.163)	(.940)	(.117)	(.386)	(.888)	(.365)	(.674)	(.278)	(.429)	(.192)
Modeling & Encouragement of Social Maturity	2.714	3.000	3.000	2.333	3.400	3.000	3.462	3.462	3.500	4.250	2.727	3.000	4.444	4.444	4.333	4.417	4.133	4.400	1.49638	13.24943	.25140	.45883	25.00577	2.10246	.62343	2.48708	1.61645
	(.756)	(.577)	(1.095)	(1.211)	(.986)	(.756)	(1.266)	(1.198)	(.577)	(.500)	(1.489)	(1.095)	(.882)	(.527)	(.888)	(.900)	(.640)	(.632)	(.211)	(.000)***	(.778)	(.634)	(.000)***	(.088)†	(.977)	(.089)†	(.178)
Pride, Warmth, and Affection	5.429	6.000	4.000	5.167	6.533	5.600	5.846	6.385	6.750	7.000	5.364	6.364	6.444	6.889	5.833	6.167	6.133	6.400	4.11603	2.75054	.81018	.90080	7.62841	1.12173	1.42645	.47072	3.70496
	(1.813)	(.816)	(2.366)	(1.329)	(.640)	(1.183)	(1.725)	(.961)	(.500)	(.000)	(1.433)	(.809)	(1.014)	(.333)	(1.403)	(1.267)	(.834)	(.910)	(.004)**	(.070)†	(.448)	(.410)	(.000)**	(.352)	(.246)	(.626)	(.008)**
Academic Stimulation	4.143	4.714	4.500	4.667	4.533	4.800	3.462	4.308	5.000	5.000	4.636	4.727	3.333	4.333	3.833	4.833	4.133	4.400	.68282	2.90765	4.57768	1.61352	.67610	.74066	2.45003	1.53111	.63660
	(.900)	(.488	(.548)	(.516)	(.743)	(.414)	(2.025)	(1.377)	(.000)	(.000)	(.674)	(.467)	(1.225)	(.707)	(1.337)	(.389)	(.640)	(.632)	(.606)	(.060)†	(.013)*	(.205)	(.511)	(.567)	(.093)	(.222)	(.638)
Variety of Stimulation	5.571	6.143	6.500	6.833	6.600	6.467	6.538	6.923	6.750	6.750	6.364	6.273	6.000	7.444	7.167	7.500	6.333	7.600	.53749	.27257	1.19488	.22216	5.23498	.54536	1.00646	2.99412	.61251
	(1.512)	(.690)	(1.378)	(.753)	(1.454)	(1.457)	(2.145)	(1.847)	(1.500)	(1.500)	(1.502)	(1.421)	(2.598)	(1.333)	(1.267)	(1.000)	(1.175)	(1.121)	(.709)	(.762)	(.308)	(.801)	(.007)**	(.703)	(.370)	(.056)†	(.655)
Physical Punishment	3.286	3.429	2.333	3.667	3.600	3.467	3.692	3.462	4.000	4.000	3.455	3.455	3.778	3.556	3.750	3.833	3.400	4.000	3.07458	4.39073	.39634	1.02192	.83908	.50938	1.40833	1.23328	2.15036
	(1.113)	(1.134)	(1.506)	(.516)	(.567)	(.743)	(.630)	(1.330)	(.000)	(.000)	(.934)	(1.036)	(.441)	(.726)	(.622)	(.389)	(1.056)	(.000)	(.021)*	(.015)*	(.674)	(.364)	(.436)	(.729)	(.250)	(.297)	(.082)
KIDS (N - 103)	(N = 8)		(N = 8)		(N = 16)		(N = 14)		(N = 4)		(N = 17)		(N = 10)		(N = 11)		(N = 15)		2.27689	.67311	2.15324	1.67476	.38452	.67294	2.83087	1.36608	2.29770
																			(.009)**	(.672)	(.049)*	(.129)	(.888)	(.777)	(.012)*	(.230)	(.009)**
Correct Knowledge	26.625	26.000	24.500	29.750	25.250	26.875	25.143	26.071	22.250	28.750	19.588	27.353	22.600	25.100	27.818	29.455	26.667	28.867	1.32855	1.32725	.16908	2.83810	.04631	.31642	1.57199	1.15813	1.04231
	(5.344)	(9.957)	(10.128)	(3.284)	(5.459)	(3.757)	(5.459)	(3.757)	(6.131)	(4.425)	(13.712)	(4.847)	(8.383)	(8.225)	(2.892)	(2.734)	(8.423)	(3.871)	(.265)	(.270)	(.845)	(.054)†	(.955)	(.866)	(.213)	(.319)	(.390)
Incorrect Knowledge	5.625	5.625	4.625	4.000	6.437	6.562	6.214	5.500	8.750	4.000	3.529	6.294	4.600	6.300	6.000	6.000	5.600	5.667	3.15961	.42184	1.08569	1.74301	.50790	.80089	4.53970	1.35182	3.65932
	(3.335	(3.335)	(2.387)	(.926)	(2.804)	(2.581)	(2.723)	(2.849)	(3.862)	(2.828)	(4.346)	(3.788)	(1.776)	(3.831)	(2.324)	(3.000)	(3.814)	(2.410)	(.017)*	(.657)	(.342)	(.181)	(.603)	(.509)	(.013)*	(.264)	(.008)**
Uncertainty	4.375	5.125	3.250	2.500	5.312	3.437	5.571	3.571	5.500	4.250	2.882	3.059	9.600	4.600	2.727	1.182	2.267	2.467	2.95799	.12047	4.51494	1.51306	.51302	.51120	1.27021	1.03582	2.40945
	(3.292)	(8.692)	(2.435)	(2.070)	(5.338)	(4.487)	(4.183)	(3.673)	(4.041)	(4.717)	(3.871)	(3.648)	(8.356)	(4.274)	(3.069)	(1.401)	(2.712)	(2.642)	(.024)*	(.887)	(.013)*	(.226)	(.600)	(.728)	(.286)	(.359)	(.055)†
FES (N = 71)	(N = 4)		(N = 4)		(N = 11)		(N = 13)		(N = 3)		(N = 9)		(N = 6)		(N = 8)		(N = 13)		.71295	.79091	1.16791	.58241	1.35517	.77066	.73971	2.15496	.49212
																			(.737)	(.579)	(.328)	(.744)	(.238)	(.680)	(.619)	(.052)†	(.917)
Low Expectations	.500	.250	.750	.250	1.000	.273	.538	.231	.333	.333	.556	.556	.833	1.000	.500	.375	.462	.615	.47071	.42868	.13500	.29341	1.83136	.77466	.05034	2.52650	.71996
	(1.000)	(.500)	(1.500)	(.500)	(1.000)	(.647)	(.660)	(.439)	(.577)	(.577)	(.726)	(.527)	(.983)	(1.265)	(.535)	(.578)	(.776)	(.870)	(.757)	(.653)	(.874)	(.747)	(.169)	(.546)	(.951)	(.088)†	(.582)
Moderate Expectations	10.000	10.000	9.750	10.000	9.818	10.000	9.846	9.923	10.000	10.000	9.667	9.778	9.833	9.333	10.000	9.875	9.923	9.846	.80600	.30130	.64344	.73509	2.22967	1.20539	1.48500	4.35638	.64121
	(.000)	(.000)	(.500)	(.000)	(.405)	(.000)	(.376)	(.277)	(.000)	(.000)	(.500)	(.441)	(.408)	(1.211)	(.000)	(.354)	(.277)	(.555)	(.526)	(.741)	(.529)	(.484)	(.115)	(.317)	(.234)	(.017)†	(.635)
High Expectations	5.250	6.500	4.750	5.250	6.000	6.455	4.769	4.976	4.000	4.667	6.889	6.333	6.333	6.333	6.250	6.250	6.462	6.000	.71889	1.50303	2.19281	.79873	1.01872	.73841	.98356	1.14569	.17256
	(2.754)	(2.380)	(2.986)	(2.630)	(2.530)	(2.382)	(2.279)	(1.908)	(.000)	(2.082)	(1.537)	(1.255)	(3.077)	(1.962)	(1.832)	(1.909)	(2.402)	(2.317)	(.582)	(.230)	(.129)	(.454)	(.367)	(.569)	(.519)	(.725)	(.956)

Table 17

Parent Variables: Means Scores and MANOVA's by Mode and Mode by Time for Returnees: October 1985 - April 1987

	Traditional				Home/School				Home				October 1985 F(p <)	April 1986 F(p <)	October 1986 F(p <)	April 1987 F(p <)	October 1985 to April 1987	April 1986 to October 1986	October 1986 to April 1987
	Oct. 1985	April 1986	Oct. 1986	April 1987	Oct. 1985	April 1986	Oct. 1986	April 1987	Oct. 1985	April 1986	Oct. 1986	April 1987							
HOME																			
Toys, Games, and Reading Materials (N=36)	6.444 (3.358)	7.889 (2.892)	8.111 (2.667)	8.556 (2.455)	7.667 (2.309)	8.500 (2.747)	9.667 (2.229)	9.333 (2.015)	5.333 (2.556)	9.267 (1.710)	7.733 (1.792)	9.067 (1.438)	2.50 (.098)	.17 (.847)	.61 (.548)	.43 (.656)	2.97675 (.071)+	.47156 (.628)	.81 (.452)
Language (N = 36)	6.333 (1.118)	6.556 (1.014)	6.667 (.707)	6.778 (.667)	5.833 (1.403)	6.583 (1.165)	6.833 (.389)	6.833 (.389)	5.967 (0.990)	6.800 (.414)	6.800 (.561)	6.867 (.352)	.57 (.570)	.30 (.744)	.25 (.776)	.11 (.900)	.71285 (.498)	.23594 (.791)	.08 (.924)
Physical Environment (N = 35)	6.500 (1.069)	6.000 (2.449)	6.125 (2.475)	6.125 (2.475)	6.583 (.900)	6.250 (1.055)	5.167 (2.368)	6.000 (1.758)	5.133 (2.100)	6.267 (1.100)	6.000 (1.925)	6.057 (1.679)	3.31 (.042)*	.09 (.911)	1.98 (.153)	.01 (.987)	1.85452 (.173)	3.16718 (.056)+	5.07 (.012)*
Modeling and Encouragement of Social Maturity (N = 36)	2.778 (1.202)	2.444 (1.509)	3.111 (1.167)	2.778 (.972)	3.167 (1.193)	3.583 (1.165)	2.667 (1.435)	3.083 (1.084)	3.400 (1.242)	3.933 (.384)	4.133 (.640)	4.400 (.632)	.76 (.487)	4.80 (.013)*	6.41 (.004)**	11.91 (.000)***	4.08672 (.026)*	3.92131 (.030)*	1.87 (.171)
Variety of Stimulation (N = 36)	6.000 (2.000)	6.667 (1.000)	5.778 (1.563)	6.222 (1.481)	6.000 (1.477)	6.417 (1.782)	6.583 (1.621)	6.750 (1.357)	6.067 (1.486)	7.133 (1.302)	6.333 (1.175)	7.600 (1.121)	.01 (.993)	.88 (.423)	.83 (.444)	4.83 (.014)*	2.06123 (.143)	1.28923 (.289)	3.94 (.029)*
Physical Punishment (N = 35)	3.333 (1.323)	2.556 (1.944)	3.556 (.527)	3.444 (.726)	3.364 (1.027)	2.909 (1.136)	3.455 (.934)	3.455 (1.036)	3.267 (1.163)	3.867 (.316)	3.600 (1.056)	4.000 (.000)	.02 (.977)	3.86 (.031)*	.08 (.921)	2.78 (.077)			1.32 (.280)
Academic Stimulation (N = 36)	4.111 (1.364)	4.667 (.500)	4.556 (.726)	4.889 (.333)	3.083 (1.676)	4.167 (.389)	4.583 (.669)	4.750 (.452)	2.667 (1.291)	4.333 (.488)	4.133 (.640)	4.600 (.632)	2.83 (.073)	3.08 (.060)+	1.87 (.170)	2.96 (.066)+	1.87614 (.169)	2.81694 (.074)+	.15 (.862)
Pride, Warmth and Affection (N = 36)	5.000 (1.658)	5.667 (1.871)	5.778 (1.922)	5.667 (1.000)	4.750 (2.179)	5.333 (1.435)	5.500 (1.446)	6.167 (1.030)	5.900 (1.476)	6.733 (.458)	6.133 (.834)	6.400 (.910)	1.28 (.292)	4.43 (.020)*	.72 (.495)	1.60 (.216)	.79569 (.460)	.70021 (.504)	.74 (.486)
Knowledge of Development Scale (N = 40)																			
Correct Knowledge	23.000 (5.545)	24.778 (4.142)	24.111 (5.862)	26.000 (3.606)	24.750 (4.524)	25.000 (5.317)	20.812 (13.167)	27.250 (4.987)	26.333 (6.008)	27.533 (5.041)	26.667 (8.423)	28.467 (3.871)	1.11 (.340)	1.23 (.304)	1.28 (.291)	1.32 (.279)	.05821 (.944)	.50371 (.608)	1.01 (.376)
Incorrect Knowledge	7.444 (2.128)	7.000 (2.121)	7.111 (2.934)	7.444 (3.005)	5.917 (2.323)	7.312 (2.892)	3.750 (4.359)	6.375 (3.397)	5.600 (2.874)	6.867 (3.533)	5.600 (3.814)	5.667 (2.410)	1.62 (.212)	.09 (.917)	2.27 (.117)	.86 (.430)	.21641 (.645)	6.16776 (.018)*	1.75 (.188)
Uncertainty	6.444 (5.812)	5.222 (4.604)	5.778 (6.553)	3.333 (4.690)	5.667 (3.860)	4.687 (5.016)	3.062 (3.924)	3.125 (3.757)	4.800 (3.840)	2.533 (2.642)	2.267 (2.712)	2.467 (2.662)	.62 (.660)	1.53 (.230)	1.96 (.155)	.20 (.818)			2.45 (.100)
Parental Expectations																			
Low (N = 29)	.833 (.983)	.833 (.753)	.833 (.753)	.167 (.408)	.600 (.516)	.500 (.707)	.500 (.707)	.600 (.516)	.462 (.877)	.846 (1.519)	.385 (.650)	.538 (.776)	.61 (.549)	.28 (.754)	.87 (.431)	.71 (.502)			2.63 (.090)
Moderate (N=36)	9.500 (1.414)	10.000 (.000)	10.000 (.000)	10.000 (.000)	9.750 (.452)	9.917 (.289)	9.750 (.452)	9.833 (.389)	9.571 (.938)	9.786 (.579)	9.929 (.267)	9.357 (.535)	.20 (.823)	.75 (.480)	1.71 (.197)	.43 (.656)	.38727 (.682)	1.3000 (.287)	.62 (.512)
High (N = 29)	6.333 (1.472)	8.333 (1.751)	7.000 (2.328)	7.333 (2.066)	5.000 (1.247)	5.900 (2.079)	6.500 (1.713)	6.100 (1.370)	5.769 (2.279)	6.538 (1.761)	6.461 (2.402)	6.000 (2.317)	1.89 (.172)	3.23 (.056)+	.11 (.892)	.91 (.416)	.46599 (.633)	1.36064 (.279)	.65 (.530)

NOTE: Standard deviations are in parentheses. The univariate F is derived from Wilks Lambda.

+p < .10
*p < .05
**p < .01
***p < .001

TABLE 18

Power: Mean Scores and MANOVA's by Mode and Cohort for 1986 - 87

Traditional	Childrearing Efficacy	Empowerment
3-year-olds	4.333	2.000
	(.816)	(.000)
4-year olds	4.286	9.857
	(1.496)	(1.069)
Returnees	3.000	1.786
	(1.468)	(.699)
Home/School		
3-year olds	3.083	1.667
	(1.443)	(.888)
4-year olds	4.250	2.000
	(.957)	(.816)
Returnees	(1.111)	(.827)
Home		
3-year olds	2.625	2.375
	(1.188	(.518)
4-year-olds	2.250	2.083
	(.452)	(.515)
Returnees	2.733	2.267
	(.799)	(.458)
Mode X Cohort	2.87039	.59924
Multivariate F(8,170) = 1.53000	(.028)*	(.664)
(p < .150)		
Mode	10.42274	2.61040
Multivariate F(4,170) = 8.75604	(.000)***	(.079)+
(p < .000)***		
Cohort	2.44267	.01219
Multivariate F94,170) = 1.40675	(.093)+	(.988)
(p < .234)		

Table 19

	Program	Traditional (N = 33)					Home/School (N = 31)					Home (N = 33)					Total (N = 97)				
	Child Outcome	Reading	Language	Math	Science	PPVT-VA	Reading	Language	Math	Science	PPVT-VA	Reading	Language	Math	Science	PPVT-VA	Reading	Language	Math	Science	PPVT-VA
Learning Opportunities	Teacher Contact Hours in Center			-.03 (-.33)*				.11 (.40)*	.10 (.23)	.03 (.10)	.10 (.18)										
	Teacher Contact Hours in Home		.05 (.15)	2.92 (.52)**				.13 (.16)													
	Parent Volunteer Hours				.01 (.11)																.02 (.13)*
	Reported Hours of Parent Instruction														.06 (.06)						
Child Pretest	Pretest—PPVT-Verbal Age					.64 (.59)****			.14 (.17)	.22 (.31)*	.36 (.29)*	.23 (.43)*		.27 (.61)***	.23 (.43)**	.37 (.42)*	.19 (.31)***		.23 (.42)****	.20 (.33)***	.41 (.61)****
	Pretest—HSB Reading	.81 (.53)***		.27 (.24)		.79 (.33)*	.68 (.65)****		.39 (.36)*	.23 (.26)*		.51 (.48)**			.23 (.25)*		.34 (.47)****	.26 (.29)**	.29 (.30)**	.23 (.21)**	.27 (.16)*
	Pretest—HSB Language	.47 (.39)*	.57 (.62)	.05 (.06)	.53 (.46)*						-.90 (-.46)**		.37 (.42)**					.34 (.37)***		.17 (.16)*	
	Pretest—HSB Math																	-.27 (-.19)*			
	Pretest—HSB Science									.46 (.34)*	.92 (.38)*		.53 (.41)*			.77 (.32)+		.27 (.23)*		.39 (.27)**	.74 (.22)***
Parent Pretest	Pretest—Toys, Games, Reading Materials									.28 (.15)					.48 (.18)	.63 (.15)					
	Pretest—Physical Environment																				
	Pretest—Variety of Stimulation		.43 (.16)	.44 (.17)	.96 (.27)				-1.05 (-.25)									.49 (.14)+		.56 (.16)*	
	Pretest—Maternal Encouragement								1.05 (.25)+												
	Pretest—Maternal Language														1.71 (.37)**						
	Pretest—Childrearing Style (Warmth)			.74 (.40)*																	
	Pretest—Correct Knowledge of Development								1.31 (1.06)*										.77 (.07)		
	Pretest—Incorrect Knowledge of Development			.56 (.35)*					.98 (.67)+												
	Pretest—Uncertainty About Development								1.18 (.78)*						.36 (.25)*						
	Pretest—Low Expectations		.66 (.05)																		
	Pretest—Moderate Expectations														5.98 (.21)*		2.71 (.13)+			1.30 (.06)	3.69 (.11)+
	Pretest—High Expectations	-1.54 (-.24)+													1.89 (.25)*						
Parent Posttest	Posttest—Toys, Games, Reading Materials											-.15 (-.06)	-.20 (-.06)	.65 (.21)	-.56 (-.15)	.53 (.09)			.24 (.09)		
	Posttest—Physical Environment											-.50 (-.09)	.74 (.16)	.61 (.14)		.80 (.09)					
	Posttest—Variety of Stimulation																				
	Posttest—Maternal Encouragement									1.45 (.17)	.10 (.01)			.28 (.04)	.43 (.05)	1.54 (.11)	.86 (.10)	.34 (.05)		-.21 (-.03)	.37 (.03)
	Posttest—Maternal Language																				
	Posttest—Childrearing Style (Warmth)													-1.39 (-.23)	-.51 (-.07)	-1.10 (-.09)					
	Posttest—Correct Knowledge of Development																				
	Posttest—Incorrect Knowledge of Development							.38 (.23)										.36 (.19)*			
	Posttest—Low Expectations																				
	Posttest—Moderate Expectations																				
	Posttest—High Expectations														.73 (.13)	1.47 (.15)					1.06 (.11)+
	Total Explained Variance (R^2)	.56	.58	.72	.41	.66	.42	.25	.68	.72	.70	.59	.53	.59	.85	.75	.53	.51	.46	.64	.70
	Significance Level of F	.0001	.0002	.0008	.0023	.0000	.0000	.0274	.0001	.0000	.0000	.0000	.0001	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

+ $p < .10$
* $p < .05$
** $p < .01$
*** $p < .001$
**** $p < .0001$

NOTE: Numbers without parentheses are unstandardized regression coefficients.
Numbers with parentheses are standardized regression coefficients.

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Table 20a

TRADITIONAL (N = 30)

Parent Outcome (Posttest)		Teacher Contact Hours in Center	Teacher Contact Hours in Home	Parent Volunteer Hours	Reported Hours of Parent Instruction	Pretest PPVT Mental Age	Pretest ISB Reading	Pretest ISB Language	Pretest ISB Math	Pretest ISB Science	Pretest Toys, Games, Reading Materials	Pretest Physical Environment	Pretest Variety of Stimulation	Pretest Maternal Encouragement	Pretest Maternal Language	Pretest Childrearing Style (Warmth)	Pretest Correct Knowledge of Development	Pretest Incorrect Knowledge of Development	Pretest Uncertainty	Pretest Low Expectations	Pretest Moderate Expectations	Pretest High Expectations	Total Explained Variance (R²)	Significance level of F
Toys, Games, Reading Materials	b										.69												.66	.0001
	B										.81****													
Physical Environment	b				.02						.42												.37	.0012
	B				.11						.57***													
Variety of Stimulation	b				.04	.02	.11	.07	.03				.16										.59	.0066
	B				.31	.15	.41*	.34	.13				.24											
Mother's Encouragement to Learn	b	.00							.12														.32	.0056
	B	-.05							.56**															
Mother's Language	b	-.01			.09																		.49	.0017
	B	-.14			.39*																			
Childrearing Style (Warmth)	b				.09				.21														.18	.0949
	B				.24*				.28															
Correct Knowledge of Development	b						.11											-.08	-.92				.46	.0066
	B						.06											-.03	-.67***					
Incorrect Knowledge of Development	b										.01												.00	.9647
	B										.01													
Uncertainty	b						.20																.05	.2297
	B						.22																	
Low Expectations	b				-.01			-.03			.06	.08		-.03	-.14	.07				.22	.08		.70	.0041
	B				-.17			-.86***			.80*	.69*		-.19	-1.22***	.85**				.37*	.18			
Moderate Expectations	b				.00							-.11								-.92	-.08		.33	.0224
	B				.05							-.23								-.57**	-.05			
High Expectations	b										.22			-.39								.59	.30	.0053
	B										.44*			-.47*								.43**		

NOTE: b is the unstandardized regression coefficient. B is the standardized regression coefficient.

+ p < .10
* p < .05
** p < .01
*** p < .001
**** p < .0001

Table 20b

PRESCHOOL (N = 36)

Parent Outcome (Posttest)		Teacher Contact Hours in Center	Teacher Contact Hours in Home	Parent Volunteer Hours	Reported Hours of Parent Instruction	Pretest PPVT Mental Age	Pretest HS/B Reading	Pretest HS/B Language	Pretest HS/B Math	Pretest HS/B Science	Pretest Toys, Games, Reading Materials	Pretest Physical Environment	Pretest Variety of Stimulation	Pretest Maternal Encouragement	Pretest Maternal Language	Pretest Childrearing Style (Warmth)	Pretest Correct Knowledge of Development	Pretest Incorrect Knowledge of Development	Pretest Uncertainty	Pretest Low Expectations	Pretest Moderate Expectations	Pretest High Expectations	Total Explained Variance (R^2)	Significance Level of F
Toys, Games, Reading Materials	b												1.15										.53	.0004
	B												.73****											
Physical Environment	b					.09				-.07		.48			.12								.59	.0004
	B					.38*				-.15		.57***			.15									
Variety of Stimulation	b												.58					-.12					.43	.0001
	B												.56***					-.24+						
Mother's Encouragement to Learn	b				.01																	.25	.26	.0141
	B				.37*																	.34*		
Mother's Language	b							.10			.42	-.30		-.34	.47			-.31					.71	.0001
	B							.22*			.54****	.29*		-.34*	.47**			-.44***						
Childrearing Style (Warmth)	b										.36										-1.93	.43	.44	.0005
	B										.55***										-.26	.20		
Correct Knowledge of Development	b																		-1.00				.69	.0001
	B																		-.83****					
Incorrect Knowledge of Development	b																							
	B																							
Uncertainty	b																		.89				.65	.0001
	B																		.81****					
Low Expectations	b																	-.07			-1.00		.28	.0065
	B																	-.39*			-.43**			
Moderate Expectations	b										-.04				.03						.83		.28	.0174
	B										-.22				.14						.46**			
High Expectations	b																							
	B																							

NOTE: b is the unstandardized regression coefficient. B is the standardized regression coefficient.

+ p < .10
* p < .05
** p < .01
*** p < .001
**** p < .0001

Table 20c

HOME (N = 30)

Parent Outcome (Posttest)		Teacher Contact Hours in Center	Teacher Contact Hours in Home	Parent Volunteer Hours	Reported Hours of Parent Instruction	Pretest PPVT Mental Age	Pretest HSPB Reading	Pretest HSPB Language	Pretest HSPB Math	Pretest HSPB Science	Pretest Toys, Games, Reading Materials	Pretest Physical Environment	Pretest Variety of Stimulation	Pretest Maternal Encouragement	Pretest Maternal Language	Pretest Childrearing Style (Warmth)	Pretest Correct Knowledge of Development	Pretest Incorrect Knowledge of Development	Pretest Uncertainty	Pretest Low Expectations	Pretest Moderate Expectations	Pretest High Expectations	Total Explained Variance (R^2)	Significance Level of F
Toys, Games, Reading Materials	b	.07			.01	.09			-.15													.59	.51	.0004
	B	.32*			.03	.62**			-.43*													.30*		
Physical Environment	b		.06					-.01				.44								-1.04			.53	.0001
	B		.22+					-.07				.60****								-.18				
Variety of Stimulation	b															.07							.02	.4669
	B															.12								
Mother's Encouragement to Learn	b			.00				.01						.19									.34	.0027
	B			.16				.13						.46**										
Mother's Language	b	.06																					.11	.0450
	B	.33*																						
Childrearing Style (Warmth)	b											.18											.01	.5477
	B											.10												
Correct Knowledge of Development	b																	-.42	-.34				.06	.3020
	B																	-.15	-.20					
Incorrect Knowledge of Development	b																	.67					.35	.0001
	B																	.59***						
Uncertainty	b															-.35							.08	.0315
	B															-.28+								
Low Expectations	b										.04								.02		-.59		.22	.0262
	B										.25								.27		-.39*			
Moderate Expectations	b																							
	B																							
High Expectations	b				.05											-.01							.07	.2914
	B				.27											-.03								

NOTE: b is the unstandardized regression coefficient. B is the standardized regression coefficient.

+ p < .10
* p < .05
** p < .01
*** p < .001
**** p < .0001

Table 20d

TOTAL (N = 97)

Parent Outcome (Posttest)		Teacher Contact Hours in Center	Teacher Contact Hours in Home	Parent Volunteer Hours	Reported Hours of Parent Instruction	Pretest PPVT Mental Age	Pretest ISB Reading	Pretest ISB Language	Pretest ISB Math	Pretest ISB Science	Pretest Toys, Games, Reading Materials	Pretest Physical Environment	Pretest Variety of Stimulation	Pretest Maternal Encouragement	Pretest Maternal Language	Pretest Childrearing Style (Warmth)	Pretest Correct Knowledge of Development	Pretest Incorrect Knowledge of Development	Pretest Uncertainty	Pretest Low Expectations	Pretest Moderate Expectations	Pretest High Expectations	Total Explained Variance (R²)	Significance Level of F
Toys, Games, Reading Materials	b B				-.01 -.07						.30 .38***		.35 .24*			.25 .30***							.53	.0001
Physical Environment	b B											.36 .41****			.19 .22*			-.07 -.13					.34	.0001
Variety of Stimulation	b B						-.04 -.15+						.40 .43****		.16 .22*								.32	.0001
Mother's Encouragement to Learn	b B		-.00 -.01		.01 .19*			.03 .22*	.03 .18+						.10 .24*				.00 .00				.13	.0067
Mother's Language	b B								.08 .12					-.16 -.12	.47 .34**			-.04 -.04					.10	.0121
Childrearing Style (Warmth)	b B	-.00 -.22**							.04 .08						.40 .40****								.25	.0001
Correct Knowledge of Development	b B										-.40 -.14		.87 .17					-.21 -.08	-.81 -.55****				.29	.0000
Incorrect Knowledge of Development	b B														-.01 -.00			.48 .49****					.25	.0001
Uncertainty	b B										.32 .24*		-.51 -.21+		.37 .19		-.38 -.25+		.42 .58****				.34	.0001
Low Expectations	b B																-.10 -1.23**	-.10 -.64*	-.09 -1.00*	.47 .42****	-.22 -.16+		.30	.0001
Moderate Expectations	b B										.01 .03				-.01 -.02						.31 .27**		.03	.0324
High Expectations	b B		-.01 -.13			.00 .04																.43 .42****	.23	.0001

NOTE: b is the unstandardized regression coefficient. B is the standardized regression coefficient.

+ p < .10
* p < .05
** p < .01
*** p < .001
**** p < .0001

Table 21

	Program:	TRADITIONAL					HOME-SCHOOL					HOME					TOTAL				
	Dependent Variables: Child Posttest Scores / Independent Variables:	Reading	Math	Language	Science	Mental Age	Reading	Math	Language	Science	Mental Age	Reading	Math	Language	Science	Mental Age	Reading	Math	Language	Science	Mental Age
LEARNING OPPORTUNITIES	Child In-Class Hours	-.10 (-.03)	-.11* (-.21)	-.28 (-.02)					-.01 (-.19)	-.20 (-.20)			.39 (.20)	-.26 (-.09)				-.10* (-.19)			
	Home Visit Hours			.99 (.19)																	
	Parent Volunteer Time				.01* (.21)													.00 (.07)			
	Parent Home Teaching Time																		-.03 (-.05)		
CHILD PRETEST	HSMB - Reading	.46*** (.42)	.40* (.34)		.41* (.33)		.52*** (.48)	.31** (.43)				.4*** (.39)		.23 (.24)	.26** (.44)	.14 (.07)	.67**** (.47)	.37**** (.37)	.19* (.18)	.23** (.23)	.33* (.13)
	HSMB - Math									.67*** (.31)	2.33*** (.62)										
	HSMB - Language	.27* (.36)	.18 (.22)	.80**** (.71)		.37** (.31)			.38* (.39)		-4.13*** (-.64)			.25* (.23)			.16* (.15)		.65**** (.51)	.15* (.16)	
	HSMB - Science				.60*** (.50)		.31* (.2[illegible])			.72**** (.37)	.35** (.38)			.39* (.22)	.05 (.05)	.43 (.25)				.41**** (.24)	.56** (.30)
PARENT PRETEST	PPVT - MA	.13* (.25)				.64**** (.55)					.33* (.26)	.15* (.29)	.23** (.42)		.18* (.34)	.57*** (.56)	.13** (.22)	.14* (.22)		.16** (.24)	.48** (.40)
	Toys, Games, Reading Materials								.67*** (.41)	-.01 (-.01)	.62 (.12)				.26 (.14)	.71* (.20)		.31**** (.18)			.36 (.10)
	Physical Environment												.41 (.15)		.23 (.09)	.16 (.28)			.30* (.13)		.16 (.28)
	Variety of Stimulation																		.41 (.13)	.31 (.10)	
	Maternal Encouragement							1.10* (.41)													
	Maternal Language					.16 (.04)								.91* (.21)			.11 (.05)				
	Childrearing Style (Warmth)																	.13 (.06)			
	Correct Knowledge of Development																				
	Incorrect Knowledge of Development				.00 (.00)																
	Uncertainty About Development												-.25* (-.31)								
	Low Expectations							-2.07* (-.23)							1.16 (.15)						
	Moderate Expectations																				
	High Expectations																				
PARENT POSTTEST	Toys, Games, Reading Materials												.11 (.05)		-.16 (-.06)			-.08 (-.03)			
	Physical Environment													.76 (.16)		-.05 (-.01)					-.45 (-.08)
	Variety of Stimulation				1.07* (.20)			-.24 (-.08)						.99* (.22)					.07 (.02)		
	Maternal Encouragement	-.17 (-.06)		.02 (.01)							-.27 (-.06)					.88 (.07)				-.29 (-.07)	.51 (.05)
	Maternal Language						.69* (.23)		.03 (.01)					-1.96* (-.38)			.15 (.06)				
	Childrearing Style (Warmth)									.50 (.18)											
	Correct Knowledge of Development																				
	Incorrect Knowledge of Development													.55* (.29)							
	Uncertainty About Development		-.10 (-.10)																		
	Low Expectations																				
	Moderate Expectations																				
	High Expectations					1.4[illegible]* ([illegible])										.12 ([illegible])					.59* (.1[illegible])
	Total Explained Variance (R^2)	.61	.55	.69	.62	.72	.45	.31	.46	.75	.63	.63	.47	.60	.63	.73	.46	.37	.52	.40	.61
	Significance Level of F	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

Table 22

Program: / Independent Variables:	TRADITIONAL	HOME-SCHOOL	HOME	TOTAL
Child In-Center Hours	.20 (.23)	.03* (-.31) .03* (.27) .03 (.19)	.02 (.13) -.03* (-.27)	-.03** (-.22) .02** (.22)
Home Visit Hours	.30 (-.13)			
Parent Volunteer Time				.03* (.15) .02 (.10)
Parent Home Teaching Time	.03 (.16) .01 (.02) .11** (.46)		.30 (.39)	
Toys, Games, Reading Materials	.63**** (.75) .46**** (.55) .02 (.03) .48** (.28)	.36**** (.66)	.36** (.39)	.25*** (.48)
Physical Environment		.27* (.32)	.36** (.46)	.43*** (.47) .29*** (.30)
Variety of Stimulation	.42**** (.60)	.31** (.55) -.07 (-.05)	.17 (.33) .07 (.19)	.15 (.12) .36*** (.43)
Maternal Encouragement		.27 (.28)		
Maternal Language		.26* (.34)		.13* (.15)
Childrearing Style (Warmth)		.27*** (.30) .46** (.40) .31** (.37) .27** (.39) -.11 (-.07)	.37* (.31)	.26*** (.29) .25*** (.30) .25*** (.32)
Correct Knowledge of Development	.46*** (.53) -.31** (-.44) -.03* (-.27)			.40*** (.43) -.23*** (-.33)
Incorrect Knowledge of Development	.39* (.33)			-.02* (-.16) .46*** (.43)
Uncertainty About Development	.03** (.32)	-.05*** (-.70) .03 (.07) .05*** (.08)	.30*** (.36) .25** (.48) -.02 (-.19)	.39*** (.39) -.03 (-.08)
Low Expectations	-.16* (-.30)	-4.46* (-.33)	-.09 (-.08) -.08 (-.08) -.03 (-.02) -1.32*** (-.36) .02*** (.39) -.26* (-.39)	-.21* (-.13) -.42*** (-.27) -.51*** (-.22) -1.16*** (-.26) .36*** (.32)
Moderate Expectations	.07 (.23)		2.17* (.28) -.43* (-.25) .29* (.27)	-.39* (-.22) .13* (.20)
High Expectations	.40*** (.50)	.30*** (.66)	-.46* (-.27) .30 (.39)	.36*** (.47)
Reading	.02 (.27)		.02 (.06)	
Math	.12* (.26) .46* (.31)			
Language	-.09 (-.17)			
Science		-.19* (-.29)	.03 (.29)	-.02 (-.26) .04 (.03) .02 (.03) -.11* (-.27)
PPVT - MA	.03 (.20)	.03* (.27)		-.03 (-.03) .08 (.18)
Reading				
Math	-.03 (-.19)	-.05 (-.09)	-.03 (-.12)	
Language		-.03 (-.09)	.03 (.13)	-.02 (-.03) .02 (.07) .06 (.22)
Science			-.02 (-.09)	
PPVT - MA	-.02 (-.15) .03 (.21) -.03* (-.30) -.03 (-.09) .03** (.40)		-.03 (-.11) .02* (.23)	.25 (.03) .02 (.12) .21 (.17) .26 (.16)
Total Explained Variance (R^2)	.43 .31 .36 .28 .44 .27 .37 .37 .19 .31 .30 .33	.30 .41 .32 .16 .26 .35 .40 .19 .46 .43	.44 .25 .25 .26 .12 .28 .37 .40 .25 .31 .35 .35	.28 .25 .20 .20 .25 .25 .25 .25 .25 .39 .26 .40
Significance Level of F	.0000 .0006 .0000 .0431 .0005 .0153 .0002 .0040 .0236 .0113 .2490 .0001	.0000 .0002 .0000 .0000 .0264 .0220 .0000 .0295 .0000 .0000	.0000 .0009 .1250 .2212 .1401 .0043 .0000 .0070 .0004 .0000 .0004 .0006	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .3901 .0000

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TABLE 23

Teacher/Home Visitor Satisfaction Scale

ITEM	χ^2	p<	High	Low
Communication/Interaction with Parents	10.32726	.03553*	Home	Traditional
Time Teaching/Interacting with Children	6.52777	.1630		
Time Spent on Home Visits	9.18333	.1635	Home	Traditional Home/School
Time to Know Parents/Children Responsible For	18.25	.0056**	Home	Traditional
Children's Progress in Cognitive Development, School Readiness	10.55	.0321*	Home	Traditional Home/School
Children's Progress in Growth of Social Competence	1.81818	.4029		
Amount of Information on Community Resources to Share	9.3333	.0533+	Home Home/School	Traditional
Amount of Direct Teaching with Children	9.58333	.0481*	Home Traditional	Home/School
Support from Head Start Staff	12.35226	.0546+	Traditional Home/School	Home
Amount of Record Keeping	2.95-	.5662		
Cooperation from Teachers/Aides/HV's	5.12727	.5276	Mostly Satisfied	Very Satisfied
Time Spent with Parents on Non-Academic Issues	12.72726	.0476*	Home Home/School	Traditional
Adequacy of Equipment/Materials	14.82143	.0217*	Home Traditional	Home/School
Amount of Travel Required	8.36667	.2125		
Suitability of Classrooms	4.69444	.5836		Home/School
Constructiveness of Supervision	7.75000	.2570	Generally Satisfied	
Amount of Pay	10.71429	.0976	Mostly Dissatisfied	
Recognition Received for Work	20.31248	.0024	Traditional	Home/School Home
Progress Shown by Parents	13.45	.0364*	Home	Traditional
Opportunities for Career Advancement	15.000	.0203*	Traditional	Home/School Home
Fringe Benefits	8.476	.2053		
Reputation of Program in Community	9.29167	.0542	Home Traditional	Home/School

APPENDIX - MEASURES

Table of Measures

Child Measures

- Peabody Picture Vocabulary Test (Dunn & Dunn, 1981)
    - word list
- Head Start Measures Battery (Bergen, 1984)
    - subtests and items year 1
    - subtests and items year 2
- Teacher Rater (Peters & Stein, 1966)
    - Part A
    - Part B
    - Part C
- Behavior Survey (Katz, Peters, and Stein, 1968)

Parent Measures

- Head Start Family Research Questionnaire
    - Spring 1986
    - Spring 1987
- Knowledge of Development Scale (Duscowicz, 1973)
- Parental Expectations Scale (Busch, 1979)
- HOME Inventory (Elardo, Caldwell, and Bradley, 1975)

Staff Measures

- Head Start Staff Questionnaire

Peabody Picture Vocabulary - Word List

Form L

1	bus	'bəs	30	tying	'tī-iŋ
2	hand	'hand	31	nest	'nest
3	bed	'bed	32	envelope	'en-və-ˌlōp, 'än-
4	tractor	'trak-tər	33	hook	'hu̇k
5	closet	'kläz-ət, 'klȯz-	34	pasting	'pās-tiŋ
6	snake	'snāk	35	patting	'pat-iŋ
7	boat	'bōt	36	penguin	'pen-gwən, 'pen-
8	tire	'tī(ə)r	37	sewing	'sō-iŋ
9	cow	'kau̇	38	delivering	di'liv-(ə-)riŋ
10	lamp	'lamp	39	diving	'dī-viŋ
11	drum	'drəm	40	parachute	'par-ə-ˌshüt
12	knee	'nē	41	furry	'fər-ē
13	helicopter	'hel-ə-ˌkäp-tər, 'hē-lə-	42	vegetable	'vej-tə-bəl, 'vej-ət-ə-
14	elbow	'el-ˌbō	43	shoulder	'shōl-dər
15	bandage	'ban-dij	44	dripping	'drip-iŋ
16	feather	'feth-ər	45	claw	'klȯ
17	empty	'em(p)-tē	46	decorated	'dek-ə-ˌrāt-əd
18	fence	'fen(t)s	47	frame	'frām
19	accident	'ak-səd-ənt, -sə-ˌdent	48	forest	'fȯr-əst, 'fär-
20	net	'net	49	faucet	'fȯs-ət, 'fäs-
21	tearing	'ta(ə)r-iŋ, 'te(ə)r-iŋ	50	group	'grüp
22	sail	'sā(ə)l	51	stem	'stem
23	measuring	'mezh-(ə-)riŋ, 'māzh-	52	vase	US oftenest 'vās; Can usu & US also 'vāz; Brit, Can also, & US sometimes 'väz
24	peeling	'pē-liŋ			
25	cage	'kāj			
26	tool	'tül	53	pedal	'ped-ᵊl
27	square	'skwa(ə)r, 'skwe(ə)r	54	capsule	'kap-səl, -(ˌ)sül
28	stretching	'strech-iŋ	55	surprised	sə(r)-'prīzd
29	arrow	'ar-(ˌ)ō, -ə(-w)	56	bark	'bärk

Form L — Continued

57	mechanic	mi·ˈkan·ik
58	tambourine	ˌtam·bə·ˈrēn
59	disappointment	ˌdis·ə·ˈpoint·mənt
60	awarding	ə·ˈwȯrd·iŋ
61	pitcher	ˈpich·ər
62	reel	ˈrē(ə)l
63	signal	ˈsig·nᵊl
64	trunk	ˈtrəŋk
65	human	ˈhyü·mən, ˈyü·
66	nostril	ˈnäs·trəl
67	disagreement	ˌdis·ə·ˈgrē·mənt
68	exhausted	ig·ˈzȯs·təd
69	vine	ˈvīn
70	ceremony	ˈser·ə·ˌmō·nē
71	casserole	ˈkas·ə·ˌrōl also ˈkaz·
72	vehicle	ˈvē·ˌ(h)ik·əl, ˈvē·ə·kəl
73	globe	ˈglōb
74	filing	ˈfī·liŋ
75	clamp	ˈklamp
76	reptile	ˈrep·tᵊl, ·ˌtīl
77	island	ˈī·lənd
78	spatula	ˈspach·(ə·)lə
79	cooperation	(ˌ)kō·ˌäp·ə·ˈrā·shən
80	scalp	ˈskalp
81	twig	ˈtwig
82	weasel	ˈwē·zəl
83	demolishing	di·ˈmäl·ish·iŋ
84	balcony	ˈbal·kə·nē
85	locket	ˈläk·ət
86	amazed	ə·ˈmāzd
87	tubular	ˈt(y)ü·byə·lər
88	tusk	ˈtəsk
89	bolt	ˈbōlt
90	communication	kə·ˌmyü·nə·ˈkā·shən
91	carpenter	ˈkär·pən·tər, ˈkärp·ᵊm·tər
92	isolation	ˌī·sə·ˈlā·shən
93	inflated	in·ˈflāt·əd
94	coast	ˈkōst
95	adjustable	ə·ˈjəs·tə·bəl
96	fragile	ˈfraj·əl, ·ˌīl
97	assaulting	ə·ˈsȯl·tiŋ
98	appliance	ə·ˈplī·ən(t)s
99	pyramid	ˈpir·ə·ˌmid
100	blazing	ˈblā·ziŋ
101	hoisting	ˈhoist·iŋ
102	arch	ˈärch
103	lecturing	ˈlek·chə·riŋ, ˈlek·shriŋ
104	dilapidated	də·ˈlap·ə·ˌdāt·əd
105	contemplating	ˈkänt·əm·ˌplāt·iŋ
106	canister	ˈkan·ə·stər
107	dissecting	dis·ˈek·tiŋ, dī·ˈsek·, ˈdī·ˌ
108	link	ˈliŋk
109	solemn	ˈsäl·əm
110	archery	ˈärch·(ə·)rē
111	transparent	tran(t)s·ˈpar·ənt
112	husk	ˈhəsk
113	utensil	yu·ˈten(t)·səl, ˈyü·ˌ
114	citrus	ˈsi·trəs
115	pedestrian	pə·ˈdes·trē·ən
116	parallelogram	ˌpar·ə·ˈlel·ə·ˌgram
117	slumbering	ˈsləm·b(ə·)riŋ
118	peninsula	pə·ˈnin(t)·s(ə·)lə, ·ˈnin·chə·lə
119	upholstery	(ˌ)əp·ˈhōl·st(ə·)rē
120	barricade	ˈbar·ə·ˈkād, ˌbar·ə·ˈ
121	quartet	kwȯr·ˈtet
122	tranquil	ˈtraŋ·kwəl, ˈtran·
123	abrasive	ə·ˈbrā·siv, ·ziv
124	fatigued	fə·ˈtēgd
125	spherical	ˈsfir·i·kəl, ˈsfer·
126	syringe	sə·ˈrinj also ˈsir·inj
127	feline	ˈfē·ˌlīn
128	arid	ˈar·əd
129	exterior	ek·ˈstir·ē·ər
130	constellation	ˌkän(t)·stə·ˈlā·shən
131	cornea	ˈkȯr·nē·ə
132	mercantile	ˈmər·kən·ˌtēl, ·ˌtīl
133	ascending	ə·ˈsen·diŋ
134	filtration	fil·ˈtrā·shən
135	consuming	kən·ˈsü·miŋ
136	cascade	(ˈ)kas·ˈkād
137	perpendicular	ˌpər·pən·ˈdik·yə·lər
138	replenishing	ri·ˈplen·ish·iŋ
139	emission	ē·ˈmish·ən
140	talon	ˈtal·ən
141	wrath	ˈrath
142	incandescent	ˌin·kən·ˈdes·ᵊnt

Form L — Continued

143	arrogant	'ar·ə·gənt
144	confiding	kən·'fīd·iŋ
145	rhombus	'ram·bəs
146	nautical	'not·i·kəl, 'nät·
147	tangent	'tan·jənt
148	inclement	(')in·'klem·ənt
149	trajectory	trə·'jek·t(ə·)rē
150	fettered	'fet·ərd
151	waif	'wāf
152	jubilant	'jü·bə·lənt
153	pilfering	'pil·f(ə·)riŋ
154	repose	ri·'pōz
155	carrion	'kar·ē·ən
156	indigent	'in·di·jənt
157	convex	kän·'veks; 'kän·ˌ, kən·'
158	emaciated	i·'mā·shē·ˌāt·əd
159	divergence	də·'vər·jən(t)s
160	dromedary	'dräm·ə·ˌder·ē also 'drəm·
161	embellishing	im·'bel·ish·iŋ
162	entomologist	ˌent·ə·'mäl·ə·jəst
163	constrain	kən·'strān
164	infirm	in·'fərm
165	anthropoid	'an(t)·thrə·ˌpȯid
166	specter	'spek·tər
167	incertitude	(')in·'sərt·ə·ˌt(y)üd
168	vitreous	'vi·trē·əs
169	obelisk	'äb·ə·ˌlisk also 'ō·bə·
170	embossed	im·'bäst, im·'bost
171	ambulation	ˌam·byə·'lā·shən
172	calyx	'kā·liks, also 'kal·iks
173	osculation	ˌäs·kyə·'lā·shən
174	cupola	'kyü·pə·lə, ·ˌlō
175	homunculus	hō·'məŋ·kyə·ləs

Head Start Measures Battery-1985 Version

Social Scale

*** Leadership ***

Know someone who knows the game should teach it
Know experts in the game help others play

*** Fairness ***

Know more work means more pay
Know pay should be given in proportion to work

*** Feelings ***

Identify one who is happy by a facial expression
Know a peer is not happy when needs are not met
Identify an adult's feelings in a situation
Know a peer is happy when needs are met
Know a peer is angry when acted toward unkindly
Identify one who is sad by a facial expression

*** Turn-Taking ***

Know children should take turns
Know children should have equal turns

*** Ownership ***

Know decisions about something is made by owner
Know the person who has a secret shares it

*** Helping & Sharing ***

Know it is nice to help when asked
Know sharing is nice regardless of benefits
Know it is nice to return a favor
Know when sharing is appropriate

Social Scale

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Know someone who knows the game should teach it
Know experts in the game help others play

*** Fairness ***
Know more work means more pay
Know pay should be given in proportion to work

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*** Helping & Sharing ***
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Know it is nice to return a favor
Know when sharing is appropriate

Reading Scale

*** Match/Identify Letters ***
Match upper & lower-case letters with same forms
Match up & lower-case letters with similar forms
Match upper, lower-case letters w/ unlike forms
Identify upper & lower case letters by name

*** Letter Patterns ***
Recognize a familiar pattern of letters
Order letters to form a familiar pattern

*** Sentence Completion ***
Supply a missing verb in spoken sentence
Supply a missing noun in spoken sentence
Supply a missing adjective in spoken sentence

*** Rhymes & Sounds ***
Told a word - give the sound of the first letter
Told 2 rhyming words - give a third rhyming word

Perception Scale

*** Shape Recognition ***

Construct match of a shape - using 4 parts
Match a simple shape which has been rotated

*** Shape Relationships ***

Arrange 3 colored shapes to match example
Arrange 3 colored shapes from memory
Know objects look different from other views

*** Pattern Recognition ***

Construct match of example pattern
Construct match of example pattern from memory
Construct reverse match of example pattern

Math Scale

*** Numeral Recognition ***
Identify written numeral up to 5
Match numerals up to 5 with groups of objects
Identify written numerals up to 20

*** Conservation of Number ***
Judge 2 short rows of equal length as equal
Judge 2 = length rows of unequal no. as unequal
Judge 2 short unequal length rows of = no. as =
Judge 2 long rows of equal length as equal
Judge 2 long unequal length rows of = no. as =

*** Counting & Ordering ***
Counting between 3 and 5 objects
Identify the number of objects in a small group
Counting out loud to a number between 6 and 10
Counting to 10 from a number between 2 and 5
Counting out loud to a number between 11 and 20
Identify the position of an object in a row

*** Addition ***
Judge = sets as unequal after adding to one set
Adding two small sets of objects
Judge = sets as unequal after adding to both
Judge unequal sets as = after taking from one
Adding two large sets of objects
In story-add small sets showing how many in all

*** Subtraction ***
Tell how many in a small set after taking some
Tell how many in a large set after taking some

Language Scale

*** Story Meaning ***

Told short story-explain why something happened
Sequence 3 pictures to illustrate a story
Explain something based on social rule

*** Conversation ***

Ask question on phone to find out something
Take turns in a conversation
Use appropriate greeting on phone
Take turns and maintain topic of conversation
Ask questions to learn about people
Use appropriate farewell statement
Use greeting appropriately
Use appropriate farewell statement on phone
Recognize need for introductions
Identify self on phone

*** Directions ***

Label steps to be taken on path
State game's objectives
Describe a turn in a path

*** Phrases ***

Act out sentence with 2 dependent clauses
Repeat sentence word for word - 2 descriptors
Act out a sentence given in the passive

*** Language Rules ***

Pluralize regular nouns appropriately
Use regular possessive form appropriately
Use correct form to describe size comparison

Science Scale

*** Discrimination ***
Identify means of movement of animals
Identify an object by its texture

*** Classification ***
Group animals by physical similarity
Group similar domestic animals
Group plants by physical similarity

*** Factual Knowledge ***
Identify tangible plant needs (e.g. water)
Identify animals that nurse their young
Identify clothing for a weather condition
Identify intangible plant needs (e.g. sunlight)
Identify an object that a magnet attracts
Identify an animal that eats a given food
Identify an object used for sensing temperature

*** Sequencing ***
Given weather event series - identify next event
Given one weather event - identify prior event
Given weather event series-identify prior event
Order 3 stages of an animal's life cycle
Order 3 stages of a plant's life cycle
Order 5 stages of an animal's life cycle

*** Prediction ***
Identify an inappropriate shadow for an animal
Know appliances need to be plugged in to work
Predict balance of a seesaw - varying weight

SOCIAL DEVELOPMENT SCALE

UNDERSTANDING FEELINGS

Identify one who is happy by a facial expression
Know a peer is angry when acted unkindly toward
Know a peer is happy when needs are met
Identify an adult's feelings in a situation
Know a peer is not happy when needs are not met
Know situations where one feels sorry/sad

UNDERSTANDING FRIENDSHIP

Knows situations where praise is appropriate
Knows friends do things together
Knows friends do things for each other
Knows friends share experiences with each other

COMMUNICATING TO SOLVE PROBLEMS

Can communicate needs to obtain assistance
Can communicate to teach one something new

LEADERSHIP

Know someone who knows the game should teach it
Know experts in the game help others play

OWNERSHIP

Know decisions about something is made by owner
Know the person who has a secret shares it

TAKING TURNS

Know children should have equal turns

HELPING & SHARING

Knows situations where one should share
Know it is nice to help when asked
Know it is nice to return a favor
Asks for assistance from appropriate helper
Shares: concrete defined reinforcement
Shares: internal inititiative + concrete reward
Knows you can ask one to share with you

READING SCALE

IDENTIFY PRINT

Identify print from a picture and scribble
Identify print from scribble & psuedo-letters

IDENTIFY WORDS

Identify word in full pictorial context & story
Identify word in full pictorial context
Identify own name
Identify printed word when told related story

PRINT DIRECTIONAL RULES

Knows direction on reads-1 line on 1 page
Knows direction one reads-2 lines on 1 page
Knows direction one reads-2 lines on 2 pages
Identify beginning of a printed line on 1 page
Identify end of a printed line on 1 page

STORY CONCEPTS

Identify cause of event story with major cue
Identify cause of event in story with minor cue
Identify story character's goal with major cue
Identify story character's goal with minor cue
Identify story character's feelings w/ minor cue

SENTENCE COMPLETION

Supply a missing noun in spoken sentence

LETTER KNOWLEDGE

Match upper & lower-case letters w/ same form
Identify upper & lower-case letters by name

SOUNDS & RHYMES

Says first letter-sound of a spoken word
Told 2 rhyming words-give a third rhyming word
Says first sound of a spoken word

PERCEPTION SCALE

SHAPE RECOGNITION

Construct match of a shape-using 4 parts
Match a simple shape which has been rotated

SHAPE RELATIONS

Arrange 3 colored shapes to match example
Select match of shape in correct orientation
Arrange 3 colored shapes from memory
Know objects look different from other views

PATTERN RECOGNITION

Construct match of example pattern
Construct reverse match of example pattern

COLOR RECOGNITION

Recognize primary colors

MATH SCALE

NUMERAL RECOGNITION

Identify written numerals up to 5
Identify written numerals up to 20

CONSERVATION OF NUMBER

Judge 2 short rows of equal length as equal
Judge 2 long rows of equal length as equal
Judge 2 long unequal length rows of = no. as =

COMPARISON OF QUANTITY

Judge which of 2 small sets has more
Judge which of 3 small sets has the most

COUNTING & ORDERING

Identify the number of objects in a small group
Counting between 3 and 5 objects
Counting out loud to a number between 6 and 10
Counting out loud from a number between 6 and 10
Identify the position of an object in a row

ADDITION

Adding two small sets of objects
Judge = sets as unequal after adding to one set
Judge = sets as unequal after adding to both
Adding two large sets of objects
Judge unequal sets as = after taking from one
In story-add small sets showing how many in all

SUBTRACTION

Tell how many in a small set after taking some
Tell how many in a large set after taking some

LANGUAGE SCALE

WORD MEANING

Act out "before" actions
Act out "after" actions

STORY MEANING

Told short story-explain why something happened
Sequence 2 pictures to illustrate a story
Explain something based on social rule
Sequence 3 pictures to illustrate a story

CONVERSATION

Ask question on phone to find out something
Take turns in a conversation
Use appropriate greeting on phone
Take turns and maintain topic of conversation
Use appropriate farewell statement
Use appropriate farewell statement on phone
Ask questions to learn about people
Use greeting appropriately
Recognize need for introductions
Identify self on phone

DIRECTIONS

Label steps to be taken on path
State game's objectives
Describe a turn in a path

PHRASES

Act out sentence with 2 dependent clauses
Repeat sentence word for word-2 descriptors
Act out sentence given in the passive

NATURE AND SCIENCE SCALE

DISCRIMINATION
Identify means of movement of animals
Identify an object by its texture

CLASSIFICATION
Identify an animal by its habitat
Group animals by physical similarity
Group similar domestic animals
Group plants by physical similarity
Identify an animal by 1 important characteristic

FACTUAL KNOWLEDGE
Identify tangible plant needs (e.g. water)
Identify animals that nurse their young
Identify an object that a magnet attracts
Identify intangible plant needs (e.g.sunlight)
Identify clothing for a weather condition
Identify an animal that eats a given food
Identify an object used for sensing temperature

SEQUENCING
Given weather event series-identify next event
Order three stages of an animal's life cycle
Order 3 stages of a plant's life cycle
Given one weather event-identify prior event
Order 5 stages of an animal's life cycle
Given weather event series-identify prior event

PREDICTION
Identify an inappropriate shadow for an animal
Predict balance of a seesaw-varying weight
Know appliances need to be plugged in to work

Teacher Rater

Part A

Part B

Part C

Project Head Start Research
and Evaluation
1985

Child's Name: ____________________________

Program Name: ____________________________

Teacher's Name: ___________________________

Number of Children in Group: __________

Number of Children in Child's Family: ______

Child's Position in Family: __________________
(eg., oldest, youngest)

Today's Date: _____________________________

Part One

Circle the phrase that, in your estimation, most nearly characterizes the child's behavior under each heading, in situations you have had an opportunity to observe, either in group sessions and in the child's home. ✓

1. Continuing in activities, the child:

   A. wanders from activity to activity with no sustained participation.
   B. continues in an activity only as long as others are involved.
   C. continues in own activity but is easily diverted.
   D. continues in own activity and leaves it only when interrupted.
   E. continues in own activity in spite of interruptions.

2. Sustained interest in structured activities, the child: ✓

   A. refuses to participate in structured activities.
   B. frequently leaves the activity.
   C. wanders in and out of the activity, participating briefly.
   D. remains in the group but becomes restless (ie., fidgets, nudges, talks, etc.)
   E. remains in the group and actively participates.

√ 3. When performing tasks, the child:

A. refuses to do as asked.
B. usually has to be asked two or three times before beginning a simple task.
C. usually begins a task the first time asked, but dawdles and has to be reminded.
D. begins a task the first time asked, but is slow in completing it.
E. begins a task the first time asked and is prompt in completing the task.

! 4. Communicating wants, the child:

A. has difficulty communicating in any effective way.
B. seldom verbalizes wants; acts out by pointing, pulling, crying.
C. sometimes verbalizes, but usually combines actions with words.
D. usually verbalizes, but sometimes acts out wants.
E. nearly always verbalizes wants.

5. Borrowing, the child:

A. does not borrow.
B. takes objects when in use by others without asking permission.
C. sometimes asks permission to use other's objects.
D. frequently asks permission to use other's objects.
E. nearly always asks permission to use other's objects.

6. Sharing, the child:

A. adamantly refuses to share equipment or toys.
B. grudgingly shares but only after adult intervention.
C. occasionally shares willingly with others.
D. frequently shares willingly with others.
E. nearly always shares willingly with others.

7. Playing with others, the child:

A. watches but does not play.
B. usually plays alone.
C. plays with others but limits play to one or two children.
D. usually plays with larger groups (3 or more children).
E. always is part of a larger group (3 or more children).

8. Initiating involvement, when other children are involved in an activity which permits the inclusion of additional children, the child:

   A. observes the activity but does not get involved.
   B. observes the activity while continuing his own play.
   C. sometimes initiates getting involved in the activity.
   D. frequently initiates getting involved in the activity.
   E. nearly always initiates getting involved in the activity.

9. Taking turns, the child:

   A. avoids such situations.
   B. frequently interrupts or pushes others to get ahead of them in an activity involving taking turns.
   C. attempts to take a turn ahead of time but does not push or quarrel in order to do so.
   D. waits in turn, but teases or pushes those ahead.
   E. waits for a turn or waits to be called on.

10. Disrupting others, when playing in group, the child disrupts others:

    A. Nearly always
    B. Frequently
    C. Occasionally
    D. Hardly ever
    E. Never

11. Dominance by others, the child:

    A. submits to the domination of others without objecting.
    B. submits to the domination of others after physical or verbal objection.
    C. usually does not submit to the domination of others.
    D. hardly ever submits to the domination of others.
    E. never submits to the domination of others.

12. Reaction to frustration, when things are not going well, the child:

    A. has a tantrum (screams, kicks, etc.) or withdraws into seclusion.
    B. finds a substitute activity without seeking help in solving the problem.
    C. immediately seeks help from others in solving the problem
    D. seeks help from others in solving the problem after making an effort to solve it on his/her own.
    E. solves problems entirely on his/her own.

✓ 13. Dependence upon adults, the child will continue on own in activity without adult encouragement:

   A. Never
   B. Hardly ever
   C. Sometimes
   D. Frequently
   E. Nearly always

14. Accepting limits, when an adult sets limits on activity (play space, use of materials, type of activity, etc.), and explains reasons for the limits, the child accepts the limits:

   A. Never
   B. Hardly ever
   C. Sometimes
   D. Frequently
   E. Nearly always

15. Responses to unfamiliar adults, the child:

   A. avoids, or withdraws from contact with unfamiliar adults.
   B. when initially approached by unfamiliar adults, avoids contact, but if approached again, is responsive.
   C. submits to contact, but is unresponsive.
   D. responds to overture by unfamiliar adult, but does not initiate contact.
   E. readily moves toward unfamiliar adults.

✓ 16. In unfamiliar situations, the child:

   A. restricts him/her self to activities in which he has previously engaged.
   B. watches others engage in new activities, but does not participate.
   C. joins in an activity which is new only if other children engage in it.
   D. joins with other children in an activity which is new to everyone.
   E. engages in the activity which is new, even though other children are not involved.

17. Effecting transitions, in changing from one activity to another, the child: ✓

    A. requires personal contact by an adult (ie., holding hands, leading, etc.) and a great deal of special attention.
    B. will not move toward new activity until the physical arrangements have been completed, need specific encouragement.
    C. makes transition, only after general encouragement or reminder.
    D. moves toward new activity when the teacher announces the activity.
    E. moves toward new activity without physical or verbal clues.

18. Changes in routine, when there is a change in daily routine, the child accepts the change without resistance or being upset: ✓

    A. Never
    B. Hardly ever
    C. Sometimes
    D. Frequently
    E. Nearly always

19. Seeking help, when involved in an activity in which help is needed, the child:

    A. leaves the activity without seeking help.
    B. continues in the activity but only if help is offered.
    C. persists in the activity and finally seeks help.
    D. seeks help from others immediately.
    E. persists in activity without seeking help.

20. Leadership, when in a situation with other children, the child:

    A. almost always is the leader and initiator of other's activities.
    B. frequently is the leader and initiator of other's activities.
    C. may be the leader or a follower depending on the day or activity.
    D. usually is a follower of other's leads and initiations.
    E. almost always is a follower of other's leads and initiations.

Part Two

Rate the child along a continuum from 1 to 5 as you see the child's behavior falling between the two defined extremes. Circle *your* choice

1. Motor activity:

Restricted movement; does not attempt climbing and/or other difficult large muscle motor activities.	1	2	3	4	5	Moves freely and easily through space; engages in vigorous motor activities; attempts difficult physical tasks.

2. Unable to perform fine muscle activities such as cutting with scissors.

Unable to perform fine muscle activities such as cutting with scissors.	1	2	3	4	5	Easily performs intricate tasks with hands; shows excellent coordination.

3. Use of conceptual language:

Limited use of conceptual language; speaks primarily in nouns and verbs; little attempt to categorize or see relationships.	1	2	3	4	5	Makes comparisons, counts, uses concepts of size, shape, number, color (not necessarily accurately).

4. In play:

Limited expression of fantasy, literal use of language concreteness.	1	2	3	4	5	Expresses him/her self imaginatively (plays adult and other fantasy roles).

5. Social competence:

Seems isolated or unsure with other children.	1	2	3	4	5	Easily mixes with other children in all kinds of situations.

134 6. Decision making: (When faced with alternatives in an unstructured situation) 135

Wanders aimlessly from one activity to another, or does not choose any.	1	2	3	4	5	Makes decisions easily and readily and pursues the chosen activity.

7. Coping with unexpected situations:

Cries, panics, withdraws, becomes immobile.	1	2	3	4	5	Explores alternative choices.

8. Dependence on adults:

Depends upon adults for directions or for carrying out activity.	1	2	3	4	5	Proceeds on own without dependence on adults.

Part Three

The following questions are guidelines for the teacher's additional comments. They should not be considered restrictive. Brief and pointed responses will do very well. Additional comments may be put on the back of the sheet.

1. In terms of your goals for the children enrolled in your program, do you feel that this child has made a good adjustment or a significant advance?

2. What do you consider this child's greatest need?

3. How would you characterize his/her verbal ability?

4. Do you think the child will be ready to compete successfully in the public schools?

5. Do you see any weakness in the child which will require the special attention of those who work with him/her in the future?

Thank you for your cooperation.

Behavior Survey

Teacher______________ # Children_____ # Adults_______ Observer__________
Date____________Time________ Round__________School_________________________

Activity:

1. Task orientation: Teacher prescribed and T appropriate; is not.nec. whole group activity. A. Attentive to T; B. Strongly intent on individual work; C. Intent on individual work; D. Disinterest; E. Attent. to other child. F. Social work; G. Intent non T prescribed work; H. Aimless wandering; I. Disruptive.			
2. Affect: In response to whatever behavior. A. High; B. Moderate; C. Low; D. Listless.			
3. Motivation: A. Mainly sensory-motor; B. Mainly achievement; C. Mainly social; D. Routine compliance; E. Other.			
4. Cognitive: A. Seeking info; B. Offering info; C. Curiosity; D. Following cog. plan; E. Problem solving; F. Time; G. Color; H. Number; I. Comparison; J. Recall; K. Space; L. Causality; M. None			
5. Motility: A. Expansive; B. Neutral; C. Constricted			
6. Interpersonal behavior: 6.1 Child to T: A. Present; B. Absent			
Response to T. initiation: A. Complies; B. Ignores; C. Resists; D. None.			
Seeks support, help, affection, approval; A.. Strong; B. Moderate; C. Slight; D. None.			
Seeks recognition for achievement: A. Strong; B. Moderate; C. Slight; D. None.			
Verbalization to T: A. Confident; B. Hesitant; C. Whine; D. Perseveration; E. Stammer; F. None.			
6.2 Obs. child to other child: A. Present B. Absent.			
A. Active interchange; B. Approach tentatively; C. Passive part; D. Passive watching; E. Imitates; F. Avoids.			
A. Active friendly; B. Neutral; C. Hostile			
A. Dominative; B. Neutral; C. Submissive.			
A. Active sharing; B. Not tolerate sharing; C. None.			
A. Active competition; B. Avoid; C. None.			
Verbalization to other child: A. Confident; B. Hesitant; C. Whine; D. Perseveration; E. Stammer; F. None			
6.3 Other child to obs. child: A. Present; B. Absent.			
A. Approach active; B. Approach tentatively; C. Passive watching; D. Accept; E. Ignore; F. Reject.			
A. Friendly; B. Neutral; C. Submissive.			
A. Active sharing; B. Not tolerate sharing; C. None.			
A. Active competition; B. Avoid; C. None.			
Verbalization to obs. child: A. Confident; B. Hesitant; C. Whine; D. Perseveration; E. Stammer; F. None.			

Head Start Family Research Questionnaire

1986 Version

1987 Version

HEAD START DELIVERY MODES 1985

PARENT INTERVIEW FORM

Parent's Name: ____________________ Interviewer: ________________

Child's Name: ____________________ Date: ________________

Program: ____________________ Group/Class: ________________

We would like to know what parents like you with children in Hea Start think about this program. Your help will be greatly appreciated.

We realize that some parents work or have other obligations, while others have more time to take part more fully in the program.

1. Have you:

   a) Helped with the planning of your own child's program?
   Yes/No How?

PROBE FOR COMPLETE STATEMENT:

   b) Worked as your child's teacher in the home regularly?
   Yes/No
   About how many hours each week? ______

   c) Been asked to help in the classroom or group sessions, for instance, by being an aide, volunteer, transporting children to or from the Center, etc.? Yes/No
   If so, please tell me when and how.

   d) Attended scheduled parent meetings or special training events? Yes/No
   If yes, tell me about them.

   If not, can you please tell me why.

   Was timing, transportation, or baby-sitting a problem? Specify which.

e) Been asked to serve on a policy council or other committees? Yes/No Please tell me about it.

2. Now I would like to ask you about how your child's participation in Head Start may have affected you and your family.

   a) Do you think that this year with Head Start helped you to better understand children, in general? Yes/No How?

   How about your understanding of your own child's development and learning? SEEK SPECIFIC EXAMPLES.

   b) Do you think that this year with Head Start changed the way you view your part in your child's education? Yes/No How?

   How about after your child enters the public schools?

   c) All children have problems in the schools from time to time. Some parents feel confident they can help their children through the difficulties, others are less sure about their need or ability to help.

   Do you think your child will have some problems in school? What kinds of problems, if any, do you see as likely?

   Do you feel that you should help? When and How?

   Do you feel confident that you will be able to help when and if the time arises?

3. Making ends meet and raising a family in this day and age is not easy. From your participation in Head Start during this last year:

   a) Do you feel that this year with Head Start helped you to cope with family problems better? Yes/No
   How?

   b) Do you feel you know more about the community where you live and the services that are available (such as medical, social services, etc.)? Yes/No
   What services might be helpful to you and your family in the future?

   c) Do you feel that this year with Head Start helped you to provide better health care or nutrition for your family? Yes/No Examples?

   d) Did you make friends with other parents? Yes/No Who?

   Do you feel that they might be helpful to you if a need arises? Yes/No How?

   e) Have you met anyone else that you think will be helpful to you and your family?

4. In your own words, what do you think has been the most important outcome for you, your child or your family as a result of your participation in Head Start.

5. Do you think that this year with Head Start has affected how you feel about yourself as a person? Yes/No How?

Head Start Family Research Questionnaire

Spring 1987

Parent or Guardian's Name

Program

Name of Interviewer

Today's Date

PART I
FAMILY DATA SURVEY

Child Information

Name	Sex	Birthdate	Years in Head Start	Handicapping Condition (if any)
____________	___	_______	________	____ None ____ Speech ____ Physical ____ Visual ____ Social/Emotional ____ Hearing ____ Developmentally Delayed ____ Other (Please specify)

Adult Information

Name	Birthdate	Occupation (P/F)	Education	Living in the Home with Child
____________ Father (biological)	_______	____________	_______	___________
____________ Mother (biological)	_______	____________	_______	___________
____________ Others living in the home (Please specify relationship)	_______	____________	_______	___________
____________ Other (Please specify relationship)	_______	____________	_______	___________

Sibling Information

Name	Sex	Birthdate	Years in Head Start	Handicapping Condition (if any)
____________	___	_______	________	______________
____________	___	_______	________	______________
____________	___	_______	________	______________
____________	___	_______	________	______________

Other information of importance to understanding the home environment ________

____

____

PART II
PARENT INTERVIEW FORM

		YES	NO
1.	Have you or any other adult living in the home:		
a.	helped in the planning of the child's program?	___	___
b.	worked as a teacher in the home regularly?	___	___
c.	helped in the Head Start classroom or group sessions?	___	___
d.	served as a regular aide in the classroom?	___	___
e.	provided transportation for children other than your own?	___	___
f.	attend regularly scheduled parent meetings?	___	___
g.	attended special training session or educational programs?	___	___
h.	served on Head Start Policy Council or committees of Policy Council?	___	___
i.	helped in fund raising for Head Start?	___	___
j.	helped to prepare meals for the Head Start Program?	___	___
2.	Now I would like to ask you about how your child's participation in Head Start may have affected you and your family.		
a.	Do you think that this year with Head Start helped you to better understand children, in general?	___	___
b.	Do you think that this year with Head Start changed the way you view your part in your child's education?	___	___
c.	Do you feel you know how to make your home a good place for the child to learn?	___	___
d.	Do you think that you will take part in your child's education after your child enters the public schools?	___	___
e.	Do you feel you can control your child's behavior effectively?	___	___
f.	Do you find it is necessary to spank or otherwise physically punish your child when he or she misbehaves?	___	___
g.	Do you think your child will have some problems with other children when he or she goes to public school?	___	___
h.	Do you think your child will have problems with school work?	___	___
i.	Do you feel that the teacher will get along with your child?	___	___
j.	Do you feel confident that you will be able to help if and when some of these problems come up?	___	___

3. Making ends meet and raising a family in this day and age is not easy. From your participation in Head Start during this last year:

		YES	NO
a.	Has Head Start helped you to cope with family problems better?	___	___
b.	Do you feel you know more about the services that are available in the community where you live (such as medical, social services, etc.)?	___	___
c.	Do you feel that Head Start helped you to provide better health and dental care for your family?	___	___
d.	Do you feel that Head Start helped you to provide better nutrition for yourself and your family?	___	___
e.	Did you make friends with other Head Start parents who might be helpful to you if a need arises?	___	___
f.	Through Head Start have you met others in the community who might be helpful to you and your family?	___	___
g.	Have you become more aware of employment and/or educational opportunities for you or other adult family members as a result of your Head Start experiences?	___	___
h.	Do you think that this year with Head Start has made you Feel better about yourself as a person?	___	___
i.	Do you feel you can do things to improve your community?	___	___
j.	Do you feel that you made a contribution to the Head Start program?	___	___

PART III

1. About how many hours each day do you work directly in teaching your child? ___________

2. Do you use what the child is learning in Head Start to plan new things at home? ___________

I. Please check the column which tells whether you think your child can do each task without help or prompting.

My Child:

Can	Cannot	
___	______	. . . tell you how to play a simple game
___	______	. . . tell what you do to win the game
___	______	. . . count 5 candies out of a bag of candy
___	______	. . . tell how many candies are left after he/she's eaten 3 of the 5
___	______	. . . sort a deck of cards by hearts, diamonds, spades, and clubs
___	______	. . . do simple jig-saw puzzles
___	______	. . . find 2 matching socks in a basket of laundry
___	______	. . . make a rhyme
___	______	. . . find his/her name in a list of names
___	______	. . . tell when someone is angry
___	______	. . . take turns

II. Please check the response which you feel is the best way to handle the situation.

1. Billy was playing with his blocks. A couple of blocks wouldn't stay and Billy started throwing them about the room. Father said:

_____ Stop throwing your blocks. It's not safe to throw blocks.
_____ What could happen if you throw blocks around the room?
_____ Since you're having trouble with your blocks, why don't you play with another toy instead.
_____ Please stop throwing your blocks.

Why did you choose this response?

2. Please check the best response.

David kept asking his mother to play with him. Mother told David that she was very busy right now. But David still kept asking her to play. Mother said:

_____ Please stop asking me to play with you now.
_____ Why do you think I cannot play with you right now?
_____ While I'm finishing my work, why don't you do a puzzle?
_____ Please stop asking me to play with you, I am busy with my work now.

Why did you choose this response?

3. Please check the response you feel is best in this situation:

At Christmas time, Bobby and his mother were in the living room, Bobby saw a reflection of their Christmas tree in the window and told Mother that they had another Christmas tree outside. Mother said:

_____ That is a copy of our Christmas tree shining in the window.
_____ That is our own Christmas tree you see in the window. It's just like when you see yourself in the mirror.
_____ If you stood in front of the tree, what would you see in the window?
_____ Yes, I see the tree in the window. But now let's decorate our tree in here.

Why did you choose this response?

III. Which answer would you give to each person? The same responses may be used in more than one blank but please place only one letter in each blank. (For example, you may answer response D to 3 different ages on the right-hand column, but you cannot place a D and an A on the same blank)

1. If I were asked, "What is an airplane?" I would say:

A. This is an airplane (while showing a picture).
B. It's a kind of transportation like a bus or a car, only it has wings and goes in the sky.
C. We saw people fly in an airplane on television one time.
D. You could get in it and fly through the sky to some far away place.
E. An airplane can fly in the air.

When speaking to:

_____ a 2-year-old
_____ your own child
_____ a 9-year-old
_____ an adult

2. If I were asked, "What is a dog?"
I would say:

A. A dog can be a pet or a watchdog.
B. A dog is an animal with fur and four legs and some people have them for pets.
C. A dog is furry and barks.
D. (Point to a dog or picture of a dog) That's a dog.
E. Barkley is the dog on Sesame Street.

When speaking to:

_____ a 2-year-old
_____ your own child
_____ a 9-year-old
_____ an adult

3. If I were asked, "What is a tree?"
I would say:

A. A tree has a big trunk and branches you can climb and it has leaves that are usually green.
B. I like to climb trees, don't you?
C. Trees are plants with leaves or needles and big tall trunks instead of stems.
D. A tree has leaves and a trunk.
E. In front of our house, there's a tree.

When speaking to:

_____ a 2-year-old
_____ your own child
_____ a 9-year-old
_____ an adult

PART IV

1. When you started in the Head Start Program, what did you want to get out of it?

Do you feel these goals have been met?

	YES	PARTIALLY	NO
For yourself:			
1.	___	___	___
2.	___	___	___
3.	___	___	___
For your children:			
1.	___	___	___
2.	___	___	___
3.	___	___	___

2. What do you feel were the goals of the program?

For yourself:			
1.	___	___	___
2.	___	___	___
3.	___	___	___
For your child:			
1.	___	___	___
2.	___	___	___
3.	___	___	___

3. What were the major accomplishments of the program?

4. What were the problems you encountered?

Knowledge of Development Scale and Parental Expectation Scale

Project Head Start Research
and Evaluation
1985

Interviewer's Name: ____________________

Program Name: ____________________

Child's Name: ____________________

Parent/Interviewer: ____________________

Date: ____________________

These statements are about children and how they behave. For each statement, you are asked if you agree or disagree with the statement. If you agree with the statement, circle AGREE. If you disagree with the statement, circle DISAGREE. If you are not sure whether you agree or disagree, circle NOT SURE.

1. Self-concept is the way one thinks and feels about one's self.

   Agree Disagree Not Sure

2. Other children who are about the same age as the child are called peers.

   Agree Disagree Not Sure

3. Children who have average or above-average intelligence will never have emotional problems that prevent them from learning and from being successful in school.

   Agree Disagree Not Sure

4. A child does not need to explore and experiment in order to learn.

   Agree Disagree Not Sure

5. Readiness means having a strong desire to do something.

   Agree Disagree Not Sure

6. A child's brothers and sisters are called siblings.

   Agree Disagree Not Sure

7. Hitting and fighting and pushing others around are examples of aggressive behavior.

Agree Disagree Not Sure

8. Children's self-concepts determine, to a large extent, how they behave and how able they are to learn.

Agree Disagree Not Sure

9. A child needs opportunities to play and do things with other children of the same age.

Agree Disagree Not Sure

10. Children's play seems to be only a way of having fun, with children not learning too many things through their play.

Agree Disagree Not Sure

11. Discipline means punishing a child when doing something wrong.

Agree Disagree Not Sure

12. Frustration means not being able to do something or get something that you want or need.

Agree Disagree Not Sure

13. It can be damaging to label a child as naughty or lazy or stupid.

Agree Disagree Not Sure

14. What happens before a child is born doesn't have any effects, good or bad, on the child's development.

Agree Disagree Not Sure

15. Motivation means knowing what you should do and doing it.

Agree Disagree Not Sure

16. Most developmentally delayed children look the same as normal children.

Agree Disagree Not Sure

17. Children's cognitive abilities determine how happy or sad or relaxed or afraid they will be.

Agree Disagree Not Sure

18. Achievement refers to how well a child does a given task.

Agree Disagree Not Sure

19. When children are handicapped, not much can be done for them.

Agree Disagree Not Sure

20. Preschool children have a highly developed capacity for abstract thinking.

Agree Disagree Not Sure

21. A child's attention span is the time it takes the child to solve a problem.

Agree Disagree Not Sure

22. It is always possible to tell how children feel by the expression on their faces.

Agree Disagree Not Sure

23. It is normal for children two years old and under to be close together but to play separately.

Agree Disagree Not Sure

24. Parents should not be involved in a child's preschool or school experience. Such experience is strictly an educational matter that does not concern the parents.

Agree Disagree Not Sure

25. A birth defect is like a birth mark and will often go away if left alone.

Agree Disagree Not Sure

26. A young child typically doesn't really know how long five minutes or an hour is or the difference between tomorrow and next month.

Agree Disagree Not Sure

27. Sensory stimulation means providing things for a child to see and hear and feel and smell and taste.

Agree Disagree Not Sure

28. An example of eye-hand coordination is seeing that a square looks different from a circle or triangle.

Agree Disagree Not Sure

29. An example of visual discrimination is being able to put beads on a string.

Agree Disagree Not Sure

30. Children need to be successful to develop confidence in their ability to do things.

Agree Disagree Not Sure

31. The handicapped child should not play with non-handicapped children because it will just be frustrating.

Agree Disagree Not Sure

32. Adults should never deliberately embarrass or ridicule a child.

Agree Disagree Not Sure

33. Children need to have adults show that they like them and enjoy them.

Agree Disagree Not Sure

34. To be consistent in handling children means to react about the same way each time they do something wrong instead of scolding sometimes and laughing other times.

Agree Disagree Not Sure

35. Frowning, smiling and shrugging your shoulders are examples of non-verbal communication.

Agree Disagree Not Sure

36. In general, it is better to tell children what they should not do rather than what they should do.

Agree Disagree Not Sure

37. Young children should have toys and materials that they can do many different things with rather than those they just watch.

Agree Disagree Not Sure

The following questions are about your hopes for your child's future. You probably have not thought about many of these things before, and some of the questions may be difficult to answer. A number of the questions refer to the future, but we would like to have your ideas as they seem to you now.

Each of the questions should be answered either yes or no. If the answer is yes, circle YES, if the answer is no, circle NO.

YES NO 38. Do you think your child will go on dates when a teenager?

YES NO 39. Do you think your child will, when an adult, obtain a driver's license and drive a car?

YES NO 40. Do you think your child will learn to read a newspaper?

YES NO 41. Do you think your child will receive assistance to buy own clothes in adulthood?

YES NO 42. Do you think your child has above average physical ability?

YES NO 43. Do you think your child has normal mental ability?

YES NO 44. Do you think your child will have a regular job and be self-supporting when an adult?

YES NO 45. Do you think your child will become a professional athlete?

YES NO 46. Do you think your child will attend a special class for slow learners when school age?

YES NO 47. Do you think your child will earn a greater income than yours when an adult?

YES NO 48. Do you think your child will participate in some regular sports activity?

YES NO 49. Do you think your child will eventually finish more schooling than you have?

YES NO 50. Do you think your child will be the most popular kid in school?

YES NO 51. Do you think your child will be responsible for the welfare of many others when an adult?

YES NO 52. Do you think your child will receive an advanced degree and become a professional, for example, a doctor or lawyer?

YES NO 53. Do you think your child will play mostly by himself when older?

YES NO 54. Do you think your child has below normal mental ability?

YES NO 55. Do you think your child will always be limited by any handicaps?

YES NO 56. Do you think your child will graduate from high school?

YES NO 57. Do you think your child will marry and have children when an adult?

YES NO 58. Do you think your child will have income from a subsidized program, for example, a sheltered workshop, disability pay, AFDC, when an adult?

YES NO 59. Do you think your child has average physical ability?

YES NO 60. Do you think your child will attend a regular school?

YES NO 61. Do you think your child will write a book some day?

YES NO 62. Do you think your child has poor physical abilities?

YES NO 63. Do you think your child will be a model husband and father/mother and wife?

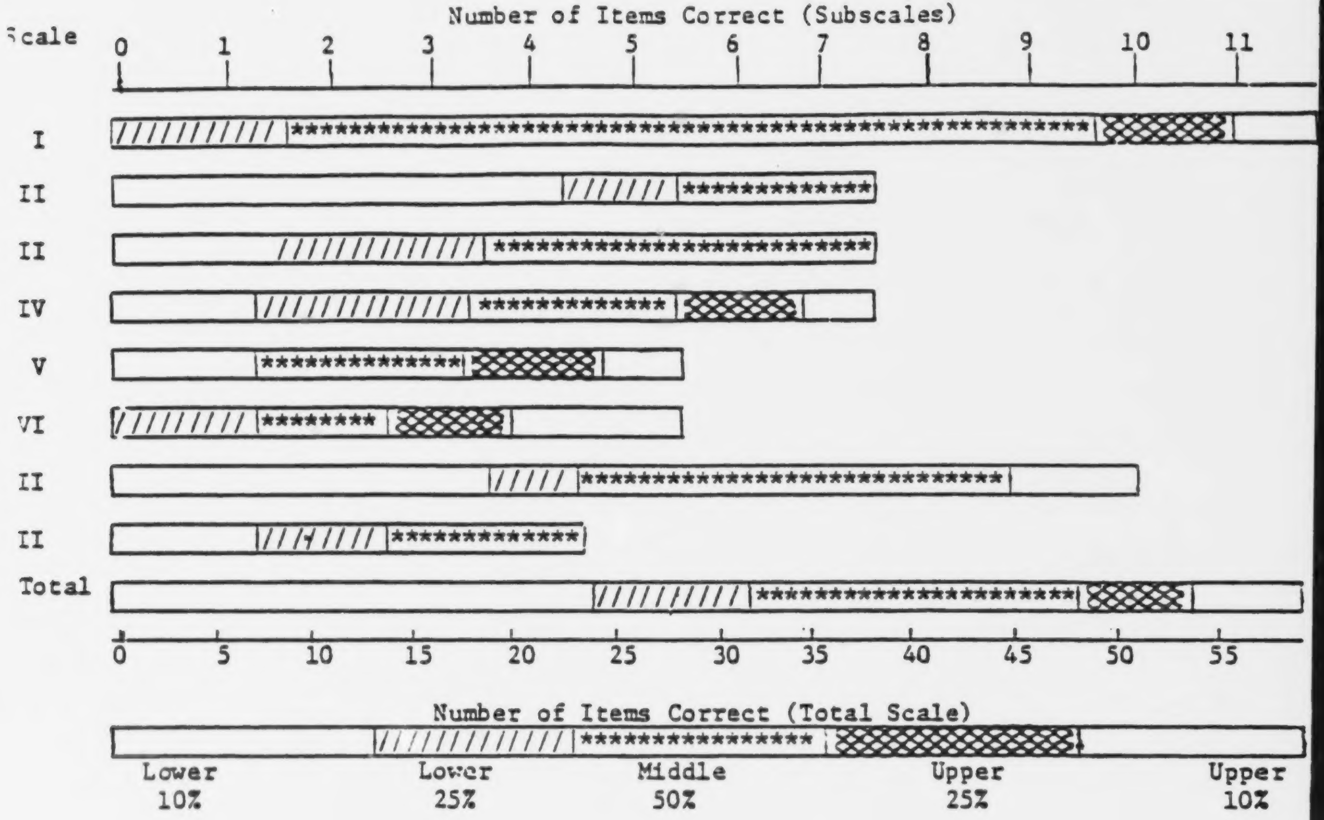
YES NO 64. Do you think your child has above average mental ability?

HOME INVENTORY (Preschool)

Child's Name ______________________ Date of Interview ______________

Child's Birthdate ______________________ Interviewer ______________

Relationship of person interviewed to child ______________________ Place of interview ______________



	Subscale	Raw Score	Percentile Band
I	Stimulation Through Toys, Games and Reading Materials		
II	Language Stimulation		
III	Physical Environment: Safe, Clean, and Conducive to Development		
IV	Pride, Affection, and Warmth		
V	Stimulation of Academic Behavior		
VI	Modeling and Encouragement of Social Maturity		
VII	Variety of Stimulation		
VIII	Physical Punishment		
Total			

HOME OBSERVATION FOR MEASUREMENT OF THE ENVIRONMENT

INVENTORY (Preschool)

I. STIMULATION THROUGH TOYS, GAMES, AND READING MATERIALS	YES	NO
1. Toys to learn colors and sizes and shapes--pressouts, play school, pegboards, etc.		
2. Three or more puzzles.		
3. Record player and at least five children's records.		
4. Toys or game permitting free expression (finger paints, play dough, crayons or paint and paper, etc.)		
5. Toys or game necessitating refined movements (paint by number, dot book, paper dolls, crayons and coloring books).		
6. Toys or game facilitating learning numbers (blocks with numbers, books about numbers, games with numbers, etc.)		
7. Ten children's books.		
8. At least ten books are present and visible in the apartment.		
9. Family buys a newspaper daily and reads it.		
10. Family subscribes to at least one magazine.		
11. Child is encouraged to learn shapes.		

II. LANGUAGE STIMULATION	YES	NO
12. Toys to learn animals--books about animals, circus, games, animal puzzles, etc.		
13. Child is encouraged to learn the alphabet.		
14. Parent teaches child some simple manners--to say, "Please," "Thank you," "I'm sorry."		
15. Mother uses correct grammar and pronunciation.		

	YES	NO
16. Parent encourages child to relate experiences or takes time to listen to him relate experiences.		
17. When speaking of or to child, mother's voice conveys positive feeling.		
18. Child is permitted some choice in lunch or breakfast menu.		
SUBSCORE		

III. PHYSICAL ENVIRONMENT: SAFE, CLEAN AND CONDUCIVE TO DEVELOPMENT

	YES	NO
19. Building has no potentially dangerous structural or health defect (e.g., plaster coming down from ceiling, stairway with boards missing, rodents, etc.)		
20. Child's outside play environment appears safe and free of hazards. (No outside play area requires an automatic "no".)		
21. The interior of the apartment is not dark or perceptably monotonous.		
22. Neighborhood has trees, grass, birds--is esthetically pleasing.		
23. There is at least 100 square feet of living space per person in the house.		
24. In terms of available floor space, the rooms are not overcrowded with furniture.		
25. All visible rooms of the house are reasonably clean and minimally cluttered.		
SUBSCORE		

IV. PRIDE, AFFECTION, AND WARMTH

	YES	NO
26. Parent holds child close ten to fifteen minutes per day, e.g., during TV, story time, visiting.		
27. Mother converses with child at least twice during visit (scolding and suspicious comments not counted.)		

28. Mother answers child's questions or requests verbally.		
29. Mother usually responds verbally to child's talking.		
30. Mother spontaneously praises child's qualities or behavior twice during visit.		
31. Mother caresses, kisses or cuddles child at least once during visit.		
32. Mother sets up situation that allows child to show off during visit.		
SUBSCORE		

V. STIMULATION OF ACADEMIC BEHAVIOR		
33. Child is encouraged to learn colors.		
34. Child is encouraged to learn patterned speech (nursery rhymes, prayers, songs, TV commercials, etc.)		
35. Child is encouraged to learn spatial relationships (up, down, under, big, little, etc.)		
36. Child is encouraged to learn numbers.		
37. Child is encouraged to learn to read a few words.		
SUBSCORE		

VI. MODELING AND ENCOURAGEMENT OF SOCIAL MATURITY		
38. Some delay of food gratification is demanded of the child, e.g., not to whine or demand food unless within 1/2 hour of meal time.		
39. Family has TV, and it is used judiciously, not left on continuously. (No TV requires an automatic "No"--any scheduling scores "Yes".		
40. Mother introduces interviewer to child.		
41. Child can express negative feelings without harsh reprisal.		
42. Child is permitted to hit parent without harsh reprisal		
SUBSCORE		

VII. VARIETY OF STIMULATION	YES	NO
43. Real or toy musical instrument (piano, drum, toy xylophone or guitar, etc.)		
44. Family members have taken child on one outing (picnic, shopping excursion) at least every other week.		
45. Child has been taken by family member on a trip more than 50 miles from his home during the past year (50 mile radial distance not total distance).		
46. Child has been taken by a family member to a scientific, historical, or art museum within the past year.		
47. Tries to get child to pick up and put away toys after play session--without help.		
48. Mother uses complex sentence structure and some long words in conversing.		
49. Child's art work is displayed some place in house (anything that child makes.)		
50. Child eats at least one meal per day, on most days, with mother (or mother figure) and father (or father figure). (One parent families get an automatic "no".)		
51. Parent lets child choose certain favorite food products or brands at grocery store.		
SUBSCORE		

VIII. PHYSICAL PUNISHMENT	YES	NO
52. Mother does not scold (yell?) or derogate child more than once during visit.		
53. Mother does not use physical restraint, shake, grab, or pinch child during visit.		
54. Mother neither slaps or spanks child during visit.		
55. No more than one instance of physical punishment occurred during the past week. (accept parental report).		
SUBSCORE		

HEAD START STAFF QUESTIONNAIRE

As part of the study we are doing it is important that we gain some understanding of your job, your background, and your opinions. The information you provide will only be used for research purposes and will only be seen by the research staff. It will be shared with Head Start Program Administration and the National Head Start Office only in summary form. Your name will not be connected with any specific answers. Please return your questionnaires directly to Mary Jo Berg.

PART I

Background Information

1. Name ______________________________

2. Head Start Program ____________________

3. Please check the position your currently hold: Check one

_____ Head Teacher/Teacher
_____ Home Visitor
_____ Teacher Aide/Assistant Teacher
_____ Classroom Aide

4. What is your typical weekly work schedule?

Hours	Monday	Tuesday	Wednesday	Thursday	Friday
From:	_____	_____	_____	_____	_____
To:	_____	_____	_____	_____	_____

5. Employment history in the field of early childhood education:

Type of Job	Type of Program	Dates Worked	Part/Full-Time
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

6. My highest level of schooling was: Check one.

_____ Some High School
_____ High School or GED Diploma
_____ Vocational School
_____ Some College/AA Degree
_____ Bachelor's Degree
_____ Advanced Degree

7. If you have some college or have completed a degree, what was your field of study?

_____ Early Education/Child Development
_____ Elementary/Kindergarten Education
_____ Secondary Education
_____ Special Education
_____ Other (please specify) ____________________________

8. Do you hold a Child Development Associate Credential? (Yes/No)

9. How many years of PAID experience do you have working with young children? ____________ (other than intermittent baby sitting)

10. How many years have you been working for Head Start? _____

11. How many children in your program do you have direct contact with and responsibility for in your current job? _____

12. Please check the space that most accurately describes your present marital status:

_____ Single, never married
_____ Currently married, first marriage
_____ Currently married, previously divorced or widowed
_____ Currently divorced/separated/widowed/one prior marriage
_____ Currently divorced/separated/widowed, more than one prior marriage

13. Are you now, or have you been a Head Start parent? (Yes/No)

14. How many years of VOLUNTEER experience have you had working with young children? _____

15. Do you intend to work for the Head Start Program next year? (Yes/No)

PART II

For the following items CIRCLE the abbreviation that indicates your current level of satisfaction with the following aspects of your job:

	Very Unsatisfied	Somewhat Unsatisfied	Somewhat Satisfied	Very Satisfied
a. The amount of communication and interaction I have with parents.	VU	SU	SS	VS
b. The amount of time I have teaching and interacting with children.	VU	SU	SS	VS
c. The amount of time I spend on home visits.	VU	SU	SS	VS
d. The amount of time I have to get to know parents and children for whom I am responsible.	VU	SU	SS	VS
e. The amount of progress shown by the children in the program in the areas of cognitive development and school readiness skills.	VU	SU	SS	VS
f. The amount of progress shown by the children in the area of social competence.	VU	SU	SS	VS
g. The amount of information I have to share with parents concerning community resources.	VU	SU	SS	VS
h. The amount of direct teaching I am able to do with children.	VU	SU	SS	VS
i. The amount of support I receive from other Head Start Staff (e.g., administrators, educational coordinator, Health/nutrition coordinator.	VU	SU	SS	VS
j. The amount of record keeping I have to do.	VU	SU	SS	VS

		Very Unsatisfied	Somewhat Unsatisfied	Somewhat Satisfied	Very Satisfied
k.	The amount of cooperation I receive from other teachers/aides or home visitors.	VU	SU	SS	VS
l.	The amount of time I must spend on non-academic issues with parents (e.g., social and health services).	VU	SU	SS	VS
m.	The adequacy of equipment and materials I have to work with.	VU	SU	SS	VS
n.	The amount of travel I have to do.	VU	SU	SS	VS
o.	The suitability of the classroom or physical space.	VU	SU	SS	VS
p.	The constructiveness of the supervision and leadership I receive.	VU	SU	SS	VS
q.	The amount of pay I receive.	VU	SU	SS	VS
r.	The amount of recognition I receive for the work I do.	VU	SU	SS	VS
s.	The amount of progress shown by parents in the program.	VU	SU	SS	VS
t.	The opportunities for career advancement available within the program.	VU	SU	SS	VS
u.	The fringe benefits I receive.	VU	SU	SS	VS
v.	The reputation the program has in the community.	VU	SU	SS	VS

PART III

1. Please state briefly the goals you hold for:	Do you feel these goals have been met?		
Children in the program:	YES	PARTIALLY	NO
1.	___	___	___
2.	___	___	___
3.	___	___	___
Parents in the program:			
1.	___	___	___
2.	___	___	___
3.	___	___	___
2. What do you feel are the goals of the Parents in the program for:			
Their children:			
1.	___	___	___
2.	___	___	___
3.	___	___	___
Themselves:			
1.	___	___	___
2.	___	___	___
3.	___	___	___
3. Please state briefly the Head Start administration's goals for:			
Children:			
1.	___	___	___
2.	___	___	___
3.	___	___	___
Parents:			
1.	___	___	___
2.	___	___	___
3.	___	___	___

4. Please list what you feel have been your major accomplishments for the year?

5. Please list what you feel are the major problems you encountered.